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MEDICINE GYMNASIUM, &c.
it is well worthy to be
continued to the public.

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WE whose Names are here
subscribed, having perused
this Discourse, Entitled
MEDICINA GYMNASICA, &c.
judge it well Worthy to be
communicated to the Public.

*Datum in Comitibus Censoriis
ex Ædibus nostri Collegii.
Feb. 2, 170 $\frac{4}{5}$.*

Edwardus Brown, Præses.

*Walt. Charlton,
Walt. Harris,
W. Vaughan,
Jo. Hawys,* } *Censores.*

J. Bateman, Regist.

Medicina Gymnastica :
O R,
Every Man his Own Physician.
A
T R E A T I S E
Concerning the
POWER of EXERCISE
With Respect to the
ANIMAL OECONOMY:
AND
The Great Necessity of it
IN THE
Cure of Several Distempers.
VIZ, THE
CONSUMPTION, DROPSY, HYPOCHONDRIA,
the ITCH, and other Cutaneous Irruptions.

By FRANCIS FULLER, M. A.

*The Wise for HEALTH on EXERCISE depend,
God never made his Work for Man to mend.* DRYDEN.

THE SEVENTH EDITION, Improved.

L O N D O N :

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TO THE

Duke of Richmond.



O your GRACE, as
the *Æsculapius* of the
Age, being allowed
the greatest Profes-
sor in the *Gymnastic Exercise*,
I beg leave to make an Offer-
ing of this excellent Treatise.

THAT

DEDICATION.

THAT a long Series of Success may attend your GRACE's Practice, for the Preservation of that Life which is so valuable to your own NOBLE FAMILY, your KING, and your COUNTRY, is the most ardent Wish of

YOUR GRACE'S

Most Dutiful

Humble Servant,

E. C.

P R E F A C E.

TH E Generality of Men have, for a long Time, had too narrow Thoughts of Phyfic, as if it were in a manner only confined to little more than Internals, without allowing themselves the Liberty of common Reasoning, by which they easily might have found that the human Body is liable to, and requires several Administrations of a very different Nature, and that it is very unreasonable to suppose, that since there are so many Ways for Diseases to enter upon us, there should be so few for Health to return by. Internals do indeed make up the far greatest Part of the Means of Cure; but yet there are considerable Cases where the very Nature of the Thing requires other Methods; and this would appear very obvious, if it were not for our too partial Consideration of the Body of Man, by attributing too much to

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the Fluids, and too little to the Solids; both which, though they have a mutual Dependence upon one another, yet have each of them some Properties, and if out of Order, require something particular in the Application to restore them again. Consent in the Solids answers to Mixture in the Fluids, and as an ill Ferment, as soon as it comes into the Blood, diffuses and mixes itself with the whole Mass, and cannot often be extirpated till the Medicine given for that End has been taken so long as to be diffused, and intimately mixed with the Blood likewise; so a violent Seizure in one of the solid Parts, commonly draws all the rest into Consent, and a particular Application to the Place primarily affected, shall do no good, when an universal one shall cure: And a Thing which would be trivial and vain, if used as a Topic, shall by an universal Administration, prove of the greatest Importance. We see Contraries often prove Remedies to one

one another in the Juices, and that Poisons become beneficial, when opposed to certain Humours: Why should we not then allow of the same Rule in the containing Parts of the Body? If by a supine Course of Life, the nervous Parts are weakened and relaxed, why should we not suppose the contrary Way of Living the most likely to repair them? Since then the Vigour of those Parts is acquired by Use, they are the active Part of the Man, and not always liable to the Impressions of the Fluids; for though you invigorate the Blood ever so much by the most generous Medicines, the Nerves may remain effete and languid notwithstanding; but if the nervous Parts are extended and exercised, the Blood and the Humours must necessarily partake of the Benefit, and soon discover it by the Increase of their Heat and Motion. There is so much of a relative Nature in every Thing that can concern the Health or Distemperature of the Individual,

that there is scarce any thing so prejudicial, or seemingly absurd, but may in different Circumstances prove as advantageous. The World has lately had full Evidence of the good Effects of an intense Cold, equally applied to all the Parts of the Body at once; which Method of curing would, not many Years ago, have been thought very extravagant, and certainly destructive. On the contrary, there are other Cases, where a Warm Bath is only prevalent; and though some People have supposed it to be only a kind of a last Resort, when other Things have been tried in vain; yet it is quite otherwise, it being impossible to remove some Diseases of the Limbs, without an universal equal Relaxation. Again, quite different from this is the equal Distribution of a greater Degree of Heat throughout the whole Body, which is procured by habitual Exercise: In the former Method, the Parts are relaxed; in this they are strengthened, and in every
Respect

Respect the Effects are widely different, though in both Ways there is a considerable Increase of Heat. But to carry this Enquiry farther, there are some Distempers, and those not altogether so rare neither, in the Cure of which no positive Physic, of any Sort whatsoever, can be serviceable ; nothing but a gradual Substraction of the Cause, an alterative Abstinence, if I may so speak, being necessary ; as have been some Gouts in some very temperate Persons, of a strong and rank Constitution, which nothing could remove but a very low Diet, and an intire Abstinence from Flesh ; to them Flesh being as Wine is to others, who contract that Distemper by their Excess : And the same Observation holds good likewise in the *Optthalmia*, and some other Cases of the Eyes, as any that will duly weigh the Circumstances of some Persons often subject to them, will find Reason to believe ; so that some Men are by their Consti-

tutions condemned to an Antediluvian Diet of Roots and Vegetables, or else to suffer worse Inconveniencies; and when those happen, it is absurd to expect, by the most celebrated Remedy, to cure the Disease, when the Cause continues. These are Instances of several Methods, widely different from one another, and yet of absolute Necessity in their particular Cases, which shews us, that we ought not be so eager after Courses of Pharmacy in all Cases, without distinguishing where other Ways are more rational. It is one Thing to dispose Nature to collect her own Strength, and throw off her Enemy; and it is another to assist her by the *Corpuscula*, the minute Parts of a Medicine given inwardly: The first Way has Regard to to the whole Animal Oeconomy; the second respects the Blood and Juices chiefly; the first may succeed where the second cannot, because here the Laws of Motion, and the Rules of the Oeconomy are enforced, and brought

brought to be assisting to a Recovery of Health, which in some few Cases cannot be effected by a private and simple Attempt upon the Blood only.

These are Notices which do not lie so far out of the Reach of any Man, that will give himself Leave to animadvert upon the Misfortunes of his Neighbours, but that they may be discerned; and if they were duly considered, there could be no Room for Empiricism, for that is founded on the Folly and Negligence of Mankind; and if Men will give themselves up to Expectation, and resolve to be always alike passive, in hopes the Miracle will be wrought upon them without any Concurrence on their Part, it is but just they should suffer something from the Pedantry, the little Things of the Profession, which they are so disposed to receive.

As for the Exercise of the Body, which is the Subject of this ensuing
A 4 Discourse,

Discourse, if People would not think so superficially of it, if they would but abstract the Benefit got by it, from the Means by which it is got, they would set a great Value upon it: If some of the Advantages accruing from Exercise, were to be procured by any one Medicine, nothing in the World would be in more Esteem, than that Medicine would be; but as those Advantages are to be obtained another Way, and by taking some Pains, Men's Heads are turned to overlook and slight them. The habitual increasing of the natural Heat of the Body, as I took notice above, is not to be despised; but if we consider that it is done without charging Nature with any subsequent Load, it ought to be more valuable; for I may by some generous Medicine, or a Glass of Wine, raise Nature to a great Pitch for a Time; but then when these Ingredients come to be digested and resolved into their Principles, Nature may be more oppressed with the
Remains

Remains of the Medicine, than she was at first relieved by it. Therefore if any Drug could cause such an Effect, as the Motion of the Body does in this Respect, it would be of singular Use in some tender Cases upon this very Account; but then add to this the great Strength, which the muscular and nervous Parts acquire by Exercises: If that could be adequately obtained likewise by the same internal Means, what a Value, what an extravagant Esteem, would Mankind have for that Remedy, which could produce such wonderful Effects? But since those Benefits are to be procured another Way, how difficult is it to bring People to conceive it? To build up such a Belief in the Minds of Men, is to raise a Structure, the Foundations of which can be laid with no less Difficulty, than the removing of the Rubbish of a vulgar Error.

As

As for what I have said relating to the Balsamic Method in the Cure of Consumptions, though I may perhaps give Offence to many, yet I am sure I speak the Thoughts of some of the Greatest of the Profession, if not of the Generality of Physicians, who have, for a great while, had a secret Regret at the ill Success of those Means, which nothing could have stifled and suppressed, but the Difficulty of agreeing to substitute better. This I do not pretend to do neither; this would be too daring an Enterprise for me; I only point out some few Mistakes, which one of my little Consideration may sometimes discern in the Actions of those of greater Condition. And perhaps when these Mistakes are rectified, the Business is done as well as if I had discovered to the World some wondrous Medicine, dignified with as many and as swelling Titles, as an *Eastern* Monarch; for it seems to me to be a great Mistake, to wait for some Medicine of a great
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Character, to be the Specific, or certain, or adequate Remedy of this Disease. I am inclined to think, that the Cure must result as much from some Circumstances of Management, as from any Medicine. I believe we have the best of Medicines for this Case in our Hands, if we did but take Pains to obviate some minute Circumstances that make those Medicines often prove deficient; if the Success did not vary by Reason of such small Emergencies, I do not know how we shall account for what we find to be true, *viz.* that some common and despicable Medicines shall in one Person produce a wonderful Cure, and in another do nothing at all, though as far as human Wisdom can discern, the Case is exactly the same in both; and why should it seem strange, if this should happen in Cases so fine as those of the Lungs, when we see in several Manufactures the Accuracy and Perfection of an Operation shall depend upon a certain *Finesse*

ness, the Criterion of which is scarce to be described, but to be learned only by numerous Repetitions. A Man may be told the Ingredients of a Composition, and the Way of working them up, may see it done, and not be able to distinguish the Nicety of the Circumstances, which conspire to make the Work consummate. Do not we know that in the Dyers Trade, (to give but one Instance) their Mixtures shall sometimes miscarry, and the best Artist not be able to shew a Reason for it. Now if it be thus in Matters of Artifice, I think we may with great Reason suspect something of a like Nature in some few Cases of the human Body: In these Maladies of the Breath, there is a *Finesse* peculiarly distinguished from the Circumstances of any other Diseases, as is apparent from the Power of so fine a Body as the Air; and therefore we need not think it so strange, that a little Matter should be able to give a good or bad Turn. And if this will
be

be allowed to be good Reason ; what can be so likely to obviate such Mis-carriages, as a due Application to that most moderate and easy Exercise which I have applied to the Cure of this Distemper ? That a mild Exercise will do something like this, may be learned from the Effects of those which are more violent : We know very well what has followed upon going into the Bagnio after violent Exercises ; the Blood of those Persons who have done so, has been so exalted in its Crasis, as to be upon that very Account fatally preternatural ; though upon the first Thought, one would be apt to conclude, that such violent Perspirations should rather impoverish the Blood ; but it is quite contrary, just as in hot Climates, though People sweat profusely, yet they are rather the more brisk and lively for it. And thus moderate Exercise, by augmenting the natural Heat of the Body, will enrich the Fluids, and by increasing the Velocity
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of the Circulation, every the minuteſt Particle will be brought much oftener to the Teſt of the Strainers, than otherwiſe it would have been ; ſo that both the venous Fluid and the Spirits will after an eminent Manner be exalted, and, as it were, rectified in the making. Therefore it cannot be a Doubt, that theſe Means may improve a Medicine, when it comes into the Blood, ſupply its Deficiency, and remove the inſcrutable Impediments in the Cure of ſo nice a Diſeaſe as this I am ſpeaking of.

Theſe Things are not owing to Notion and Speculation, but to Practical Obſervation, I cannot tell otherwiſe how to explain what I have ſeen to be the Effects of ſuch Means : I have ſeen a poor Gentleman at *Hamſtead*, in the moſt deplorable Extremity of a Conſumption, betake himſelf to Riding twice or thrice a Day upon his Waters, put a Stop for a Time to his Diſtemper, and keep
Death,

Death, as it were, at a Bay for some Weeks ; which plainly shewed, that if he had done so sooner, his former Medicines would undoubtedly have took Effect ; and how shall I account for this, but after some such Manner as I have here insisted on ? This is the Sum of my Thoughts on this Case, and if it does not strike the Imaginations of some People with so much Surprise, as other pharmaceutic Discourses, I cannot help it ; nay, if any should be so hard upon me as to alledge, that I am quite mistaken in the Cure of this Disease, when far advanced, let it be so ; yet I hope they will allow me thus much, that it appears plain enough, for the Nature and Power of Exercise, that we ought to distinguish in this Distemper in like Manner as we do in another, which it would not be good Manners to mention at the same Time with the Consumption of the Lungs ; in which latter Case, if a young Debauchee happens to get a Misfortune, he does not

not let it run on till it comes under another Denomination, but looks out for a present Cure, which may then be certainly obtained ; and so I think it is no less obvious, if Exercise be as efficacious as I assert, that it is in our Choice whether a Cough shall run on to a Consumption ; that is, I understand, that when a Cough comes to last a Month, and begins to chop in its Indications, to require one while incrassating Medicines, another while attenuating ones ; I say, it is high Time to look out, and set upon a resolute Course of Riding ; that by a Series of Journeys, continued Day after Day without Intermission, the obstructed Perspirations may be restored, which may then be easily effected, because the Body not being then much impaired, so many Millions of Succussions coming close upon one another, must affect both the Strainers of the whole Body, and the Juices to be strained ; and he who can oppose a Truth so manifest, must fly in the

Face

Face of Nature, and deny the Principles of the Oeconomy.

Having had some Occasion to mention the Antients, and since Gymnastick Courses made a great Part of their Physick, perhaps some will think I am setting up for one of those who cry up the Antients upon all Occasions, out of pure Enmity to the Authors of Modern Discoveries; but they will find themselves mistaken: I neither affect to be of a Party in Physick, or Singular; I seldom yet knew any one, who cried up *Acids*, or cried down *Bleeding*, who extolled the *Antients* universally, and villified the *Moderns*, but if he really understood what he pretended to, had some By-End to serve in so doing. I owe the Antients no more Respect, than what is due to those upon whose Shoulders we stand, and upon whose Rudiments we have built. We know their *Ætiology* was all wrong, their Pharmacy in general was rough and

barbarous. (I say in general, for there are some few Cases in which their Medicine will perhaps last for ever.) But yet the Ways they took to supply their Want of Medicine were very commendable, and may shame us ; their exquisite Diligence in establishing certain Diagnosticks, and their Recourse to various Exercises to help out what they wanted in other Means. It is the last of these which has given me occasion to take Notice of them ; and I think it will appear in the following Discourse to be of so much Importance, that not only in their Days, but in ours also, the Art of Curing may be said to be in some measure imperfect without it, there being some Cases in which the Use of Exercises will be absolutely necessary as long as Nature shall last.

I have this more to add, that I did not take this Subject out of Choice but Necessity : It is not owing
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to Theory and Speculation, but Experience, the severest Experience, which my own Misfortunes have given me but too much occasion to make in a Distemper, which some Years ago I happened to be afflicted with, as I have related in the *Appendix* to this Treatise. It was under that severe Discipline I made most of the Observations of this Treatise; and though mine was an Anomalous and Singular Case, yet from what I perceived to be the immediate Effects of that Exercise in common to all, and from the Manner by which it caused my Distemper to give way, I could not but discern in what other Cases it was likely to be of the same Consequence; and I have had so very many serious and calm Hours to confirm me in these Notions, that I cannot think I have extended them too far.

As for what Reception these Papers are like to meet with; though I

have ventured Abroad in a Cause so obsolete, in an Age so fruitful in Pharmacy, and abounding in splendid Discoveries; and though I am destitute of a new Hypothesis, that specious Image of Truth, that Idol to which the Learned all bow down; yet, if what I have advanced be strictly conformable to Truth, and of real Necessity in some few Extremities, I hope I may pass, upon the Merits of my Subject, though without Flourish and Ornament.

Medicina Gymnastica:

OR, A

TREATISE

Concerning the

POWER of EXERCISE,

With Respect to the

Animal Oeconomy.

THAT the Use of Exercise does conduce very much to the Preservation of Health, that it promotes the Digestion, raises the Spirits, refreshes the Mind, and that it strengthens and relieves the whole Man, is scarce disputed by any ; but that it should prove Curative in some particular Distempers, and that too when scarce any Thing else will prevail, seems

to obtain little Credit with most People, who, though they will give a Physician the Hearing, when he recommends the frequent Use of Riding, or any other sort of Exercise ; yet at the Bottom look upon it as a forlorn Method, and the Effects rather of his Inability to relieve them, than of his Belief that there is any great Matter in what he advises : Thus by a negligent Diffidence, they deceive themselves, and let slip the Golden Opportunities of Recovering, by a diligent Struggle, what could not be procured by the Use of Medicine alone.

Whether this proceeds from the Custom of these Northern Nations, so different from those of the Antients, and of more Southern Countries, who seem to have placed almost as much in their Methods of Exercise, as in the internal Physic ; or whether from the narrow Notions most People have conceived of the Art of Physic, as if it implied little more than

than Internals only, without considering that External, Mechanical, and all other Means whatsoever that give Relief, properly belong to it; this I shall not pretend to determine: But this, I think, I may venture to affirm, That most Men indulge themselves in the Expectation of more sudden Relief, than the Nature of the Case will admit of; as if they thought that Medicine was always to take a like Charm, without putting them to the Expence of much Time or Pains. They do not consider the wonderful Variety of the Disorders of Nature, and the Stubbornness of some Cases, which will not permit the Sick to be wholly passive, but indispensably oblige him to conspire with his Physician, and strive indefatigably to exalt his Constitution to a Degree requisite to supply the Defect of Internal Physick; which industrious Striving on the Part of the Sick, being what is here meant by Exercise, and

which it is my Purpose to represent as more efficacious than it is generally believed to be ; I think it proper, first, to explain what I mean by it in this Place.

By *Exercise* then I understand all that Motion or Agitation of the Body, of what Kind soever, whether voluntary or involuntary, and all Methods whatsoever, which without the Use of Internals may (or without which Internals alone may not always) suffice to enable Nature to expel the Enemy which oppresses her ; confining myself to the Consideration of it, only as it may prove Curative, not as Palliative, or barely Preservative.

And here, before I attempt to demonstrate how Exercise proves so beneficial in some few Cases, it may not be amiss to premise briefly some of the Ways Nature takes to relieve herself when in Danger of being oppressed, which may serve to illustrate my

my following Discourse; as likewise some Instances of the Efforts of Nature caused by external Application, or at least by such Internals as cannot be supposed to be Cordial or Vinous, or to be assimilated with the Blood and animal Spirits.

First, then: We may observe how Nature acquits herself of what we commonly call a Cold, wherein a considerable Quantity of the *Materia Perspirabilis* is detained, by a sudden Constriction of the Pores of the Skin. We shall find, that after some Time the saline Particles growing turgid, velligate some Fibres of the fifth Pair of Nerves dispersed above the Nose, which by Consent draw the Diaphragm into a convulsive Motion, by which the Air is pressed out of the Lungs through the Nose, with some Violence; and by the Shock the Glands of those Parts are opened, and the Humour, which was detained, is let out. This is *Sneezing*; to which frequently is joined *Gaping*

Gaping or *Retching*, another Method of Nature to shake off a Load that she finds growing upon her. This is more often repeated than *Sneezing*, and may be conceived to dilate some internal Parts of those Stretchings-out of the Limbs, and more plentiful Inspiration. *Sanctorius* tells us in the 31st *Aphorism* of his fourth Section, that, * *Corpora Oscitatione & Pandiculatione horæ dimidiæ spatio magis perspirant, quam tribus horis alterius temporis*; and compares it to a Cock's clapping his Wings after his Rest: So that it is manifest, that even in that vulgar Affect there is an Alteration caused in the Body, that is not contemptible.

To these may be added the *Singultus* or Hiccough, by which the Ventricle, when too full, endeavours to relieve herself, either by throwing off some of the rarefied Contents by the Gullet, or perhaps by the *Pylorus*.

Lastly,

* Bodies perspire more in half an Hour by Oscitation and Retching, than in three Hours at another Time.

Lastly, Let us consider how *Laughter* affects us, and it will appear, that this Contrivance of Nature, wherein the Body does sympathize with the Mind, proves so beneficial by the playing of the Muscles of the *Thorax*, and the pressing-out of the saline Particles, so frequently and sensibly as it does in some chearful People, to whom it is more habitual than others, inso-much, that it comes to be proverbially a Cause of Fatness. All these Instances shew, that Nature seems to receive more Relief from the Compression or acting of the containing Parts strictly taken, than most Men easily imagine.

As to extraordinary Efforts of Nature, to pass by what happens upon a sudden Surprise, Fear, Passion, or the like, it is certain that Torture will raise the Spirits for some Time very much, and there are as great Effects follow upon Irritation, which does not come up to the perfect Notion of Torture. What wonderful
Effects

Effects do we see produced by strong Emetics, given by Surgeons in some Cases of the Limbs and extreme Parts. Where a Person so grieved has oftentimes a robust Constitution and perfect Health, there the Medicines, though given inwardly, cannot be supposed to act after the common Manner of Alteratives, by passing into the Blood, by the Spirituousness of their Parts, or the like ; for the Person being in Health, needs no Alteration to be made in the Blood and other Juices, which are as good as they can be desired to be ; but by the Irritation of the Fibres in the Ventricle, the Spirits are raised to the highest Pitch they are capable of, and brought to communicate that Elasticity to the whole Body, all the Springs of Life are wound up, all the Pumps of Nature (if I may so speak) set a playing, and by these Means the Agony is extended to the extreme Part affected, and the Matter fixed there is attenuated and brought to
flow,

flow, that it may be absorbed by the Blood, and discharged in the Circulation: Nay, we may take notice of the great Power of a more gentle Irritation of those Fibres in those weaker *Hysteric* People, whose Spirits are of so fine a Make, or so scattered and weakened, that they cannot long bear Fasting, without very troublesome Symptoms following upon it; for they, we may perceive, are in a Sense strengthened at those Time, that the Contents of the Stomach happen to be so rarefied, as to cause a gentle *Ægritudo*, a lingering Sicknefs and Nauseousness, though not sufficient to cause them to vomit; for they shall then dispense with the Want of that Food, without which, at other Times, they could not possibly subsist with any tolerable Ease, and find themselves as strong and as free from their Tremors, Shiverings, and other ill Symptoms, as if they had eat and drank plentifully; and likewise during that Sicknefs, the Salts shall
come

come off plentifully in the Urine, which will then recover its proper Colour, though it was before as limpid as common Water. From hence it is manifest, that the animal Spirits may be made to expand, dilate, or in some ways act upon themselves, without the increasing their Quantity by such internal Medicines as may be supposed to be converted into their Substance.

Having premised these Things, I shall proceed to enquire, after what Manner Nature endeavours to clear herself of some few Distempers, which I shall consider in their proper Place, and likewise how she may more easily succeed in those Endeavours, if duly assisted by moderate Exercise ; which Assistance, if at the first View it may seem slow and gentle to produce so great Effects, will yet with the Allowance justly due to all Sorts of Alterative Physic, *viz.* of a Habit or frequent Repetition, appear to be sufficient

ficient to procure those Ends I shall assign it.

There is this Difference between the most compleat Productions of Human Artifice, and that divine Piece of Mechanism, the Body of Man, that the former are always the worse for wearing, and decay by Use and Motion ; the latter, notwithstanding the Tenderness of its Contexture, improves by Exercise, and acquires, by frequent Motion, an Ability to last the longer ; and though the Circulation, and continual and infinite Succession of Particles are the immediate Cause of Life, yet the Health, the Strength, the Well-being of the Individual, is in great Part owing to the Effects of a General Motion super-induced to these internal Motions ; which it is so far from disordering, that it aids and assists them to a greater Degree than we are wont to imagine ; for in our Considerations of the Animal Oeconomy, we seem to regard Nature
only

only as in a quiescent State, without a due Allowance for the Alterations caused by the Motion of the Whole, which yet are confessed by all to be sometimes of great Consequence: For that general Motion acting both on the Fluids and Solids of the Body, may sometimes prove the last and best Resort, for restoring the *Equilibrium* between them.

As for the Fluids: One would think the Shape and Make of the Blood-Vessels; were sufficient alone to lead us into an Opinion of the Necessity of Exercise. By reason they all terminate in a Cone, they must needs resist the Passage of the Blood incomparably more than they would have done, if they had been Cylindrical; and though all the Branches of the Capillary Arteries would, if taken collectively, make a greater Diameter than that of the great Artery, yet the Consistence of the Blood, and the extreme Fineness of those invisible Meanders,

Meanders, require the frequent Pressure and Assistance of the Muscles to increase the Circulation, which accordingly we always find very much augmented by those Means ; yet it is the Result of this swifter Current of the Blood, which should be most valuable to us ; I mean the better Digestion and Mixture of the various Particles conveyed into the Blood. I believe it will be allowed on all Hands, that the best way to bring an animal Fluid to a greater Degree of Perfection, is Digestion ; and the Excellency of that Operation consists in the just Degree of Heat which causes it ; or, to speak perhaps more properly, in the just Agitation or intestine Motion of the Particles, which may be supposed to occasion that Heat. The Standard, or Measure of this Heat or Agitation in the Animal Oeconomy, is to be taken from what we observe in a Man in perfect Health, and in the Prime of his Age ; when his Blood flows with its due Velocity, when there

of the Blood is

is an uninterrupted Secretion of all that is disagreeable to it, and it is wrought up to its florid Consistence, and a just Proportion between the serous and grumous Parts. Now this we may successfully imitate by repeated Exercise ; when the Blood happens to be impoverished and languid, we may increase the Velocity of the Circulation, and consequently the Heat following upon it, by which a great many crude Particles will be attenuated and ripened, either for Mixture or Secretion, and there will be an equal Distribution of the attenuated Particles, to the several Emunctories of the whole Body, by reason of the Solids co-operating with the Fluids ; whereas it is often quite otherwise when an internal Medicine is given, designed for one Secretion only, which may promote that, and perhaps hinder another ; as a Medicine which agrees with the Stomach, sometimes offends the Head ; for the nervous Parts being, as it were, passive in the Case, the Secretions cannot be so equally

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ly performed as when the whole Body is exercised. I would not be here misunderstood, as if I supposed that this first Effect of Motion, this Digestion would avail in many Cases, as where an ill Ferment is lodged in the Glands, or where the morbidick Particles have been so long a forming, and are strongly combined in the Blood ; but this may take Place where a greater Degree of Agitation is absolutely necessary ; as when the Blood is effete and languid, when the Chyle comes into it dispirited, and when even a proper Medicine proves offensive and burthensome, and there is scarce Power enough left in the Blood to master its Particles, and apply them to their proper Uses ; then, I say, it is time to make the Solids assist the Fluids in the dispersing of this Load which lies so hard upon them, which by gentle and close Exercise may be more easily done than many imagine. Besides, there may be a Distemper occasioned by Particles of a looser Texture in the Blood, than is usual in most Cases,

where Nature may contend and struggle with the hostile Particles, and yet not be able to get the Victory ; where there may not be a perfect Fever, nor yet a quiet Coalition between the Blood and those foreign Particles. In such a Distemper as this, it must needs be very proper to give a due Agitation to the Blood, to prepare those Particles for the several Emunctories that are ready to receive them : And this may be performed by a just Digestion, if we do but consider how much the Body is adapted to it, and how much more noble the Digestions are in the Animal Oeconomy, than in those produced by human Contrivance. In all artificial Digestions the Particles which are to be separated by the Agitation of the Liquor, must either evaporate or subside ; but in the Body there are a Multitude of excretory Ducts ready to receive the Particles of such a determinate Figure, and as renders them excrementitious, and proper to be
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cast off; so that nothing is left but what is proper to the Animal Fluids, and which Vehemence of the Motion mixes and unites, at the same Time that it breaks and moulds the others for their proper excretory Channels: So that the Agitation is in this Case (as Dr. Grew very well expresses it in his Treatise of *Mixture*) as “*car-*”
“*rying the Key to and fro 'till it hit*”
“*the Lock; or within the Lock, 'till*”
“*it hit the Wards.*” How do we know the exact Degree of Agitation, that is requisite to unite the Particles of the Fat, which are continually flowing in a very great Quantity into the Blood, with the Aqueous, by the Means of sulphureous or saline Particles? Do we not frequently observe in scorbutic Persons, who have led a sedentary Life, that their Urines are covered with an oily Film of several Colours? And is it not very natural to suppose from thence, that the Blood wants a due Motion to keep those oily Parts united with the others? But it is

no wonder if these Things are not well considered, when there is scarce any who makes Allowance enough for the Quantity of the fat Particles, which are continually passing into the Blood ; which must needs be very great, seeing the whole Skin is lined with its Vessels, besides what is heaped up about the *Omentum* and the Kidneys : So that unctuous Medicines are copiously intruded upon the Habit of the Body when there is a great Wasting of the Flesh, without regarding that the Blood is not able to master the natural *Pinguedo*, but gives it down daily, in all Probability, for want of a just Degree of Agitation or Digestion, to keep it suspended in the Blood, and to apply it to its proper Uses, and prepare it for its proper Vessels.

Beside the Power of Exercise on the Secretions of Particles purely Excrementitious, and the better Mixture of those which are Homogeneous, it
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is to be considered, that there are in the Oeconomy, Secretions made to return with Advantage into the Blood, out of which they are made ; and the Consideration of the Nature of these does afford us fresh Reasons to set a Value upon the Use of Exercise, because the Body is so framed and adapted, as to require it, in order to the furthering and increasing these Operations : And if in the Business of Fermentation, which is only a gradual Separation of the Must from the spiritous Particles of the Liquor, we find that the Motion of the Vessels in which the Liquor fermenting is contained does so much improve that Operation, as we are convinced it does by the Effects of the Carriage by Sea on Wines and other Liquors in Casks ; of how much greater Importance must the Motion of the Body be, in order to the perfecting the Animal Fluids, in a System of Mechanism so contrived as to expect and demand such an Assistance ? Where

the Solids are so fine-spun, as to determine the very Shape of the Particle of a Fluid; and where they are so disposed, that a Fluid never passes by them but it carries off some Melioration and Improvement, and therefore cannot well arrive too frequently at those Passages where it receives so happy an Alteration. Let us suppose the Blood to pass the most extreme Parts twelve Times in an Hour, when the Body is not moved; if the Motion of the Body increases this to fifteen or sixteen Times in an Hour, it will necessarily follow, that the Quantity of the Secretions by the Liver, the Spleen, the Brain, and the rest of the Glands, which separate the beneficial Juices, of which I am speaking; the Quantity of these, I say, must needs be augmented; which in Process of Time, when this is brought to a Habit, must be of some Consequence. To insist but on one of these Secretions: I take it to be no Paradox, that the more a Man stirs himself, the more
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animal Spirits are made in the Brain : Though it will be strait retorted, that by the very same Motion and Exercise, there will be a Waste of the Spirits by Perspiration, more than proportionable to the Overplus that is made in the Brain. And though I grant this, it will not suffice to discompensate the Benefit which the Blood reaps from the Augmentation of the Quantity of the animal Spirits infused into it (if I may so speak) from the Brain ; because the true animal Spirits have their Work to do in the Blood, before they come to pass off at the Skin : They are not of that fugitive Make, which at first Thought most Men are apt to suppose them to be ; they seem to be destined to contemporate the Acrimony of the Blood, to embrue it with a plastic Quality, and may serve to execute other Functions, besides that of Motion : So that it is not at all to be wondered if a Person, much accustomed to Exercises, notwithstanding the daily Expence of a greater Perspiration,

ration, should have his Blood of a better Condition, and more rich than that of another Person living a sedentary Life, by reason of the greater Impression, the greater Tincture (if I may be allowed so to speak) of this most exquisite and inimitable Fluid.

These Things are not to be stated exactly, and yet they are not to be accounted altogether precarious ; for though we shall never perhaps be able to know exactly what the Animal Spirits are, yet we may make a shift to distinguish what they are not. According to the common Notions, a well-prepared Volatile Salt, after it has passed the Lacteals, and comes into the Blood, might be taken to be a pure Animal Spirit ; and yet, undoubtedly, the Fluid prepared by the Glands of the Brain, has something in it transcendently preferable to any Thing that can be the Effect of Art. Whether those Glands are so disposed, as to unite some Vitro-aerial Particles with

with others proper to serve as a Vehicle to them, is not to be determined by me or any Body else ; but it may not be altogether so absurd to guess at some such Thing, since we know nothing in Nature that can afford Particles of that Elasticity as Nitre does ; and we may discern, that the animal Spirits seem to consist of a *Fulgur*, an * *Impetum faciens*, something that is Irradicating ; and yet withal, there seems something extremely mild and plastic, and as it were tenacious, combined with the elastic. I hope I do not run into an *Hypothesis* ; I would carry this no farther than it can be kept in Countenance by *Phænomena*, arising in the Cure of Distempers : For thus we see in the nervous Atrophy, though the Spirits, taken as *Impetum facientes*, pass freely, and are not obstructed, as in the Palsy, yet the benign plastic Quality seems to be wanting, because the Habit of Body does not thrive,

* That which Impels and causes Motion.

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though the Spirits are brought all over it : And that the Spirits, when they are in their true Purity, are concerned in Nutrition, is plain enough ; because the intercepting of them, by cutting off a Nerve, always causes the wasting of the Part to which that Nerve leads.

Thus I have endeavoured to shew some of the secret Advantages accruing to us from the frequent Use of Exercise ; and by which it will appear that the Fluids of the Body are of such a Texture, as will admit of Improvement from the greatest Rapidity of their Current, that is consistent with the Organs through which they are conveyed.

But, *Lastly*, to put these Things past all Doubt, by a well-known Observation ; we need but consider what is sometimes the Effect of too much Exercise upon taking a purging Medicine,

cine, and that is an *Hypercatharsis*. *

The Particles of the Drug being sublimed, and rendered more active by the greater Agitation in the Body, display a much greater Violence than otherwise they would have done in a Person of the same Constitution, who had given himself to Repose. This has been long ago observed, by *Hippocrates*, in the *fourteenth* and *fifteenth Aphorisms* of his *fourth Section*: From whence it naturally follows, that the Motion of the Body may cause great Alterations in the Blood; may very much improve any Juices that are conveyed into it; and that in some nice Cases, where the alterative Physic is very mild, and perhaps given in too small a Quantity, it is absolutely necessary to have Recourse to the Use of Exercise, to give an Energy to it, that it may produce the desired Effect.

* An excessive Purging.

Having thus briefly considered the Power of the Use of Exercise, I come now to shew after what Manner it affects the Solids ; and that I take to be, *first*, by giving a greater Tension to them, or restoring the true Tone of the Parts by Curing the Relaxation by which they were weakened.

That I may explain what I mean by this *Tension* or *Tone* of the Parts, it will be necessary to consider, *first*, how great is the Benefit we daily receive by only changing the Position of our Bodies, from an horizontal to an erect Position, when we quit our Beds, where in the Time of Sleep the Body has been relaxed : And this will appear best by the ill Consequences which follow upon a Person's being confined by an Accident to keep his Bed for a few Days ; for such a one always finds upon his getting up again, that his Spirits are disordered ; he finds himself Vertiginous in some measure, and a great deal weaker than he was
before

before he betook himself to that Posture. From whence it evidently appears, that Standing or Sitting, the familiar Exercises (if I may so call them) of the most sedentary Life, are absolutely requisite to keep up the Balance on the Part of the Solids, even in a State of Health, and that more violent Exercises are as requisite to recover this Balance, when sunk by Sickness. I know it may be objected here, that this Observation is chiefly owing to the Custom of changing the Posture of the Body alternately, in such a Space of Time, and that the Breaking of that Custom occasions those Disorders: But this will not suffice; for an erect Position is essential to the Well-being of the Body of Man: And if the Infant was not at such an Age brought to it by Degrees by the Nurse, though it might grow up to the Bulk of a Man, and live many Years, yet it would be a kind of a Bed-ridden Creature; Paralytic, as to the Use of its Limbs, though with the Sense of Feeling, and

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much weaker internally, for want of that Advantage which the Fluids receive from the Solids by this most familiar Degree of Tension, which we experience in standing, which Posture has ever been esteemed as a Tonick Motion.

But the Stiffness or Strength of the solid Parts will appear more evident by that sensible Increase of the Strength which Men experience when they set themselves upon any vigorous Exercise ; which continues, till through the Greatness of the Perspiration they grow tired, and relax again : Or, to borrow an Illustration from Beasts, It will appear by what *Jockeys* observe, who when they design to take the Bearings of a Running Horse, that is, measure the Extent of his Strokes, they usually let him gallop a Mile or more first, as supposing that he cannot come upon his Legs (as they term it) till he has run a considerable Time ; that is, he cannot strike out so far, though

though pressed ever so much to it, upon his first setting out, as he can after he has run some Time: Which explains what I assert, That a proper or due Degree of Exercise, enables the Nerves to dilate themselves sufficiently to take in a greater Quantity of animal Spirits, or some other Way, to us unknown, gives them a better Tone, or elater, and consequently fits them for more vigorous Actions.

But to bring the Sense of this Tension nearer to a Case of Sicknefs: Let any Man reflect, how he found himself after an Acute Distemper, wherein the solid Parts were mightily relaxed by the Heat of the Fever. When a Man in that Case rises first from his sick Bed, and makes a shift to walk a very little in his Chamber, though he quickly grows faint, and wants some Cordial to refresh him; that is, though his vital Spirits sink, as the Antients loved to express it; yet he perceives a certain Stiffness, Tension, or Strength in the solid Parts, by that

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first Attempt to walk, which never leaves him, but increases daily, till he recovers his perfect Health.

These are some familiar Instances of the Sense we have, after what Manner we come to acquire more Strength upon the Use of Exercise, and which every Man also may recollect that he has experienced more or less in himself; tho' in other Cases the solid Parts are always strengthening by Exercise, without so plain a Sense of it, as in the Instances above-mentioned: As we see what excessive Strength some Men gradually acquire, by a constant Practice of vehement Motions, begun when they were Young, which growing upon them by Degrees, they are not so sensible of the Increase of it. This is the Case of Tumblers, Rope-Dancers, and the like, in whom the nervous and solid Parts must be incomparably more wound up more tense than in all other People: And thus we see the strongest Men are of-

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ten thin and raw-bon'd, as we call it; that is, though daily hard Labour and great Perspiration carry off a great deal of the groffer Fluids of the Body, yet are the Muscles not flaccid, but tense and firm, capable of greater Actions than the Muscles of those who seem to have a better Habit of Body; which plainly indicates, that Exercise does communicate some Strength to the nervous Parts, which cannot be any other way procured; and that we may argue from the Greater to the Less, that if healthy Persons may acquire such monstrous Strength by Use, People that are Valetudinary may, by setting themselves upon a resolute and diligent Practice of moderate Exercise, obtain a proportionable Increase of Strength.

It may be expected, perhaps, that I should endeavour to explain how the Fibres come to receive a greater Power to act, by being often put upon Action, and to shew wherein the

Elater, the Spring of the Solids, does consist: But this has been attempted so largely by an eminent Author, Dr. *Baglivi*, and so much to the Disgust of very many, that it is better to rest contented with plain Experience, than to frame an *Hypothesis* for the *Modus* of so obtruse a Method of Nature, which, in all likelihood, Mankind will ever be ignorant of. But, as far as we may reasonably guess, by frequent Distension the Nerves receive a greater Quantity of animal Spirits; because the Limb which is most used, grows biggest: And there is reason to induce us to suspect, that the Fibre itself strengthens by Use, has a peculiar Faculty to exert itself more and more, as often as the *Imperium Voluntatis*, the *Fiat of the Will*, sets it upon Motion. But unless we knew the Bond of Union, and understood how the rational Soul acts upon the animal Powers, we must be content to be most ignorant, the nearer we approach in our Disquisitions to that Union: But the
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experimental Knowledge of these Parts sufficiently reproves those who hope to be delivered from some Distempers seated in the Solids, without acting suitably to the Nature of the Solids, the Subject of their Distempers: As for Instance, Suppose a Person, by frequent and unnecessary Use of the Bagno, and more unnecessary Bleedings; by the Use of hot Liquors, and a perfect Difuse of all bodily Exercise; by Passions of the Mind, and other Irregularities, is brought into the very worst of hysteric Symptoms, with a Flaccidity, and Relaxation of the whole nervous System; How ridiculous is it for such a Person to expect to be perfectly restored to a firm Habit of Body by internal Alteratives, and Methods little different from those Things which occasioned the Distemper; which though they may give wonderful Relief in the Paroxysm, yet can never restore the Tone of the Solids, which must be treated in a Manner proper to themselves, by Frictions,

Exercise of the Body, the Cold Bath, and the like ; which are very likely to be able to succeed to a perfect Cure. For why ought we not to suppose, that as all Fluids have more or less Tendency to purify and exalt themselves by Fermentation, the Solids should otherwise have a Propensity proper to the Make, to recover themselves by a due Tension? And what can be more reasonable and natural, than to conclude, that if a supine and luxurious Course of Life has enervated the Body, an active and vigorous one should restore it? If it be objected, That gentle Emetics have gone a great way towards procuring a perfect Recovery from some hysteric Cases; I have premised already, that they act upon the Fibres, and put them upon frequent Contractions, much after the same Manner as a total Exercise of the Body; and therefore in this last Case, where the first Passages are not in Fault, their Way of acting illustrates what I assert, that the Solids must be made to strengthen themselves, and
recover

recover their Spring by frequent Endeavours. But for Alteratives, strictly taken, I think it may be justly a Question, Whether there is that Medicine in Nature, that can remove this Distemper, when it has been of long Continuance; though the World has been taught above an Age ago, by *Paracelsus* and his Followers, to expect what I fear is not within the Extent of Nature: And the Impudence of Emperics is so great, as to promise every Thing that is absurd and romantic; which keeps People up with Hopes, that they may be so happy as to meet with that mighty Secret, which, even in the Quantity of a few Drops, shall, as it were, charm away the most troublesome and riveted Distemper, and so, instead of being cured, they are killed by Expectation; when the Power of Recovering their Health was in their own Hands, if they had resolutely set about the proper Means: Like the Country-Fellow in the Fable, who, when his Cart stuck in the Mire,

must needs be calling upon *Hercules* to come and help him, when with setting his own Shoulders to the Wheels, he might easily have got clear.

But moreover, a second Advantage arising from Exercise, is, that it gives the solid and nervous Parts a grateful Sensation, which in some Cases is not contemptible ; a gentle Agitation of the Spirits being able to remove some Pain situated in those Parts, which perhaps nothing else would remove so surely and so soon. To explain the Manner of this by a trivial Observation, (if any Thing in Nature can be so) let us consider, how we can separate the *Cuticle* from the true *Cutis* without Pain : It cannot be done with an Instrument without extreme Pain ; it cannot be done by Veficatories without some Pain ; but it may be done with Chafing without any Pain at all, or rather with some Pleasure, till you leave off Rubbing, and the Air comes
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to act upon the naked Fibres. Now this cannot be attributed to the Heat of the Part only, for then hot Medicines applied to the Skin would do it as easily ; but must be supposed to be owing to a certain Agitation of the Spirits in the Extremity of the Fibres, which affects them with so agreeable a Sensation as to surmount even the Pain of a Separation of their Covering, the Scarf-Skin. Now it will be allowed by all, that whatsoever Sensation there is in the Extremity of the Fibre, the same there is at the Origin of it in the Brain ; so that a pleasant Sensation in the Extremity, must needs be the same in the common *Sensorium* : And therefore it is easy to account for the good Effects of Frictions of the Limbs in some Sorts of Fits, by giving a new and different Motion to the Spirits, and thereby disengaging them from their disorderly Motions. And then if acting thus upon the Extremity of the Fibres produces such an Effect in them, it is natural to imagine, that
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that Motion, or gentle Concussion, which much after the same Manner, in some Proportion, acts upon the whole Body of the Nerves, must affect them with a Sensation proportionably agreeable, and may prove sufficient to dispose the Spirits to leave their Dispositions and irregular Motions, when they happen to be so discomposed, and consequently remove the troublesome Watchings and painful Symptoms occasioned by those Dispositions, when other Means prove ineffectual. Thus we see how natural it is for those hysteric Persons, who are vexed with obstinate Watchings, to fall into a true and refreshing Slumber by the Motion of a Chariot, when Opiates will have no Effect upon them, but rather increase their Watchings: The Spirits being the most stubborn Part of the animal Oeconomy, and not always to be compelled even by that potent Drug.

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The abstruse Nature of this Part of the animal Oeconomy, will not permit us to come at a fair Explication of these *Phænomena*, any otherwise, than by what we at different Times experience; for we must first understand, as the Author of the *Dispensary* very well expresses it,

How the same Nerves are fashion'd to sustain

The greatest Pleasure, and the greatest Pain. *Dispens. pag. 3.*

But we may discern, that the very Interruption of Pain is some Degree of Pleasure; and that the lesser Degrees both of Pain and Pleasure have something of a relative Nature in them. A Person that is afflicted with some Pain finds some Alleviation of it by tumbling and tossing in his Bed; which tumbling and tossing at another Time would be a sort of Pain: And if any one thinks this ought to be imputed to Fancy rather than Reality,

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I answer, It is such a Fancy as none can be free from ; and the denying a Person in such Circumstances, the Liberty of gratifying it, would be the greatest Cruelty, and a high Aggravation of the Pain. Besides, in Pains of the Membranes, proceeding from the Corrosion of sharp Humours thrown upon them, where the Part cannot but be very sensible of the Pain those Particles cause ; yet, even in this Case, the Spirits may be interrupted, or diverted from the performing so acutely their Office of Sensation, by being put into different Motions. I knew a hardy labouring Man, who happening to be seized with a violent Pain in his Hip, for two or three Nights, as soon as he came to Bed, kept beating his bare Hip with a Bedstaff a great while together, before he could get any Rest, and by that Means blunted the Pain, and tired himself into Sleep ; (though afterwards he removed both the Pain and the Cause, by running a Packneedle himself

himself through Part of his Hip :) Now if thus much may be done in the membranous Parts, where the Cause of the Pain is * *ab extra*, What may not be done in nervous Cases, where the Disorders of the Spirits are the prime Occasion of the Pains, if we can communicate to those Spirits a Motion contrary to that Motion which occasions the Pains, which certainly may be done by moderate and agreeable Exercise ?

From these Considerations I cannot but be induced to think, that in all obstinate Pains, caused by the irregular Motions of the Spirits, and in the true hysteric Cholic, one of the most frequent of those Sort of Pains, it would be more natural, and in no wise absurd, to recommend to the Patient the Use of a Chaise, or light Calash, even in the Paroxysm itself, than the Fatigue of Medicines ; the best of

* From without.

which,

which, except Opiates, so often prove delusive. That Exercise is convenient for Women, with Liberty to set or lie: And though the Motion at first may seem a little troublesome, and the Shocks too rude; yet I think, upon what I have hinted before, there is great Reason to expect, that after a little Patience the Spirits would be brought to relent, and disengage themselves from the *Plexus's*, * where they occasion so great Pain. I am the more confirmed in this Opinion, because there is a Pain which seems more deeply rooted, even in the Tendons of the Muscles, *viz.* the Cramp, which will frequently go off, by changing the Posture the Part was in when it was first seized, and especially by getting out of the Bed and walking a little while, when no Pressure or Ligature will remove it, unless the Person rise; by which undoubtedly the Spirits are called back into

* Contextures of the Nerves.

some of the superior Muscles, or some way or other put into a new Sort of Motion.

This Opinion may be corroborated likewise by what has been experienced by some hyfteric People, who when they have lain perhaps half a Night restless and disturbed, and without the least Inclination to Sleep ; upon getting out of their Beds, and walking a Turn or two about the Room, shall find themselves quite altered, and when they come into the Bed again, sleep well : So that if so sudden and short an Alteration of the Posture of the Body, can produce so good an Effect, much more may be expected from the Exercise I have above-mentioned ; wherein the sick Person may at once enjoy the Convenience of a Cradle, and the Vehemence of Exercise.

I might pursue this Notion, in considering the *Scorbutic Rheumatism* ; in which Case the Persons afflicted are
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generally strong, and able to undergo any Sort of Exercifes; and therefore all the Sorts of Exercifes which I fhall hereafter mention, will agree with them. But it will be needlefs to multiply Words; that Diftemper being chiefly feated in the Nerves, what I have faid already will ferve to illuftrate the Advantage, which Perfons grieved with that Diftemper might receive from a refolute and prudent Ufe of Exercife.

I hope thefe Obfervations on the Solids, will fuffice to fhew the Power of Exercife on this Part of our Bodies; and if any of thefe Speculations may feem too nice, I would be underftood, that I confider them as brought to a Habit, as frequently and clofely repeated; not as the Ufe of Exercife is generally abufed, being frequently undertaken, but feldom gone through with. It is the Want of a due Notion of a Habit, which has occafioned the Neglect of this valuable Medium
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in Phyfic : Did People allow but the same Regard to this, as they do to all other alterative Phyfic, it would then soon appear, what great Effects it could produce.

How ridiculous would a Man seem, who, when his Physician had recommended some Medicine to be taken to the Quantity of a Drachm, or of half a Drachm, should go and take half an Ounce of it, and then exclaim against the Medicine, that it disturbed him, and did him a great deal of Mischief, and that he would never take it more : Or, if instead of taking it in a moderate Quantity twice a Day, for a considerable Time, he should take that moderate Quantity but once in two or three Days, and then exclaim that the Medicine was ineffectual ? He that should act thus, would be thought to be but a very unreasonable Person ; and yet after this Manner most sick People set upon the Use of Exercise. You shall have a Man ride
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fifteen or twenty Miles, when he should ride seven or eight ; come home very much tired ; resolve never to be served so again ; and so perfectly lay aside all Hopes of any Good from the more moderate Use of that Exercise. Another shall ride out five or six Miles once in two or three Days ; finds no great Matter of Relief ; despairs of any Success from that Course ; thinks it a trivial Thing, a mere Fancy, when the Physician does not know what to do ; and so he wholly leaves off too. Now allowing that moderate Exercise to be a Medium for the Recovering of our Health, that is a very unfair Way of making use of it ; for when once a Distemper will not be driven out by rough Means, by Purging and Vomits, but we are obliged to come to alterative Physic, the Work must go gradually on, and that Physic must be used without Intermission. What is the Difference between Aliment and Medicament, but this ? The first is changed into our Nature ; the last changes

changes our Nature. Now it would be as ridiculous for a Man to expect, that gentle Drugs or gentle Means should alter his Constitution, if taken with great Intervals, as it would be for a Man to expect that the Bulk of his Body should keep up or increase, though he eat but once in two or three Days : And whatever Regard is due to internal alterative Physic, the same is due to the moderate Use of Exercise ; for if by it the Secretions are equally promoted, and the Subject-Matter of the Disease brought to despumate slowly ; it is highly requisite, that these Means should be closely repeated, with Moderation ; that Nature may not be confounded and weakened, instead of being relieved ; and without any irregular Intermiſſion, lest the Springs should run down again ; lest the Disease should have Time to ruin faster than the Means of Cure can build up.

We see, by continual Dropping, so soft a Body as Water can act upon a Stone ; we see, by incessantly following his Blow, the Smith can bring Heat into his Bar of Iron ; so that where the Act itself, simply considered, is weak and trivial, yet the Habit is of the greatest Efficacy.

Neither ought this to discourage any, who will give themselves leave to consider how slow, and yet how sure, some of the Despumations, or general Secretions of Nature, are ; wherein, if the Certainty and Security will compensate for the Slowness of the Progress, they have reason to acquiesce and submit, when there is no other Remedy left. How often has it been observed, that in some paralytic Cases, after a considerable Use of the Hot Baths, the sick Person has gone away disconsolate, without any present sensible Relief, and yet found himself cured in a Month or two after ; the morbid Matter being just moved and brought
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to flow, when he left off Bathing, and yet not perceptible to himself? And if Nature can be enabled to make such real, though slow, and, for a Time, insensible Advances towards Health, in a Subject half dead; may not we, with a great deal more Reason, expect the same and much more in a Person who has his Nerves free; the Use of his Limbs; and who, notwithstanding his Decay, is able to set upon a Course of Exercise? If Men were not wanting to themselves in a Resolution to undergo, with Patience, the Fatigue of reducing Nature indisposed to its former State by slow Measures, when violent are absolutely to be omitted; they would at last be really convinced, that Health, as well as Sicknefs, may approach insensibly; and that their tedious Struggles, and seemingly fruitless Endeavours, did gain Ground upon the secret and intimate Spring of the Oeconomy, before they came to be sensible of any the least Relief: For when once, upon the

Use of such gradual Means, there appears a sensible Amendment, the Point is almost gained, and the Work more than half done: As we see that upon the Return of the Sun, after Winter, towards us, it is some Months before the Earth shews any great Signs of his Influence; yet when once it displays the Effects of it, we can very well discern, that they are such as must have been brooding long before we perceived them. And why should not some Distempers go off leisurely, when we see so many come upon us so? There seems to be a Parity of Reason for it, though it is no very comfortable Consideration. We know the Poison of a mad Dog increases in the Body for a Month or more, before it displays its fatal Symptoms; and there is a great deal of Reason to believe that a cancerous Humour is some Years ripening, before it creates any Trouble in the Person in whose Body it is bred: Why should it seem strange then, that some Diseases require a gentle and gra-

gradual Conflict of two or three Months, when perhaps they have been a longer Time growing upon the Patient ?

What I have said would make the greater Impression, could we but have a History of the fatal Miscarriages which have happened upon preposterous Methods of Cure : An History which, I doubt, would prove a very voluminous one ; that Rashness being too usual in both acute and chronical Cases. In the first, Many are apt to force an Indication, rather than wait for one. In the latter, the World abounds with Examples of the Folly and Impatience of Mankind. To instance but in the Dropsy ; Who is there almost who cannot furnish you with the Story of one, who from a hopeful Condition in the Use of Diureticks, and corroborative Things, cast himself into the Grave by violent Purgatives, recommended by some compassionate Friend or other, to carry off

the Waters at once, with the Bead-roll of Stories to vouch its Success ; when the other Method, with a little Patience, had certainly brought him to his former Health, and perhaps in much less Time than his Disease was contracted ? So difficult it is for unhappy Man to bear the Penalty of some Months, for the Demerits of some Years ; and by manly Consideration to keep from entangling himself in his Chain, instead of getting out of it.

I am not unaware here, how hard it is to frame Arguments that can have Force enough to prevail against the Apprehensions of the Pain and Trouble to be undergone in the first Attempt of Exercise, which most sick People have conceived ; and which are oftentimes so strong, as to blind the Mind, or bribe the Will : And there is no way to deal with those People, but by Precedents ; by shewing them, that those Difficulties have in many Cases been easily overcome. And here the Cold
Bath

Bath offers itself, a severe Method of Cure taken up lately among us, and which upon the first Consideration carries Terror enough in it ; which if any one had presumed to recommend some Years ago, he would have been thought one of the most wild and barbarous of Men ; and yet we see now the Tenderest of the Fair Sex dares commit herself to that terrible Element ; and upon the first Experiment the Fears and Amazements vanish. How severe is the Sicknesh upon a Man's first going to Sea ; equal seemingly to the Effects of any strong Poison ; and yet Nature soon accustoms herself to that Motion, which is the Cause of it, and the Sailor quickly grows well ! And here it must not be supposed, that any salt Vapours arising from the Sun do contribute to this Vomiting : For it is now very well known to every one, who has but the least Smattering in Distillations, that Salt will not rise with a much greater Heat than that of the Sun : Besides, it
is

is observable, that the oldest, or most accustomed Sailors, shall vomit in bad Weather, when the Ship is put into an unusual and irregular Motion: So that it is plain, that the Motion of the Ship is the only Cause of that Sea-sickness. If therefore Nature can so soon suit herself to a Motion that can cause such terrible Symptoms, how unreasonable, how childish is it for any one to object against the Use of Exercise, because of the common and (in Comparison of a Sea-sickness) trivial Inconveniencies which must be borne in the first Trials! Some strong People shall be confounded with a very few Glasses of Wine; and yet if those very People fall to keeping of Company, and addict themselves to Wine but a little while, they shall drink vast Quantities without any Disorder. The first Pipe of Tobacco disturbs Nature to the utmost; but after two or three more, she becomes pleased with that which before disturbed her. In the Animal Oeconomy,

Oeconomy, every Thing is so wonderfully contrived, and made to conspire for the Preservation of Life, that Nature can adapt herself to all Circumstances ; she can expand herself to bear the Luxury of a Palace, and contract herself to the short Allowance, the Bread and Water of a Prison ; she can be easy under a bloated Habit of the Body, and she can make a shift to suit herself to the Expence of Fluxes, and other Evacuations ; accustoming herself so to bear them, that the longer they last, they may be in some Proportion the more familiar : But above all, she, with the most Ease, accustoms herself to the Use of Exercise ; she may be said to delight herself in that, it being in a a Manner * *de Essentiâ Naturæ* ; and therefore it is in vain, when Exercise is really necessary, for a Person to complain, after the first Trial, and say, “ I am tired ; my Bones are

* Essential to Nature.

“ fore ; my Head akes ; I am ready
“ to faint ;” or the like : For all this
must be endured, and upon patiently
repeating the Motion, though no A-
batement appear for some Days, yet
the Reward will come at last : And
as these Symptoms go off, the Strength
of the sick Person will increase.

From these Considerations I think
it sufficiently appears, that what I
have before hinted is not at all un-
likely, *viz.* That in some Cases, a
distempered Person may acquire, by
suitable Exercise habitually used, a
Degree of Strength, as much greater
than that of other sick People in the
same Circumstances, who wholly
neglect all Exercise, as the Strength
and Agility of robust Men, bred up
to violent Motions, is greater than
the Strength of other People, who,
though healthy, yet are not used to
such Things, and therefore incompar-
ably weaker.

Having

Having thus explained the Power of Motion, both on the Solids and Fluids, and having shewed how necessary it is, that such Motion or Exercise should be continued to a Habit, that it may be rendered sufficient to procure those Ends it is directed to ; I hope, after these Considerations, it will appear pretty plain, that Exercise may deserve to be taken as a *common Aid* to Physic, (to use the Term which *Asclepiades* gave it) : And it is under that Notion, that I propose it as so beneficial a Medium in the Art of Curing : So that Exercise in this Sense is to Physic, as Bandage is to Surgery, an Assistance or Medium, without which, many other Administrations, though ever so Noble, will not succeed. It is a Kind of Reserve ; but yet of that Efficacy, that the Thing you most depend upon, and although in itself very powerful, may yet receive its *Derniere Puissance* * from this Reserve.

Effectual Power.

And

And to this it is that we must undoubtedly attribute the wonderful Success which the Antients had in their Curing with such indifferent Materials, as their Pharmacy afforded them.

This will prove an Aid in a double Respect, *viz.* both of the Distemper, and of the Medicine.

In Respect of the Medicine : It is to be considered, that some Medicines may require it, in order to enhance their Virtue ; others, to remove some Inconvenience attending their Operation, which may deter People from using them so liberally as they ought to do.

As to the Former : The ordinary Circulation of the Blood may not suffice to answer the Nature of some Medicaments, and call out their utmost Efficacy ; just as we see the Heat of our Sun will cherish and keep a-
live

live some Exotic Plants, but yet will not suffice to bring them to their utmost Perfection, to flower and seed : So that Exercise, in this Case, is like the just and exact Incubation to the Egg ; that which animates the Drug, and gives it a Power to produce the Effect it is directed to. A Medicine may not avail any more without Exercise, than Exercise without a Medicine ; and yet when both are used together, there may be a Result from that Union, of the greatest Importance.

Therefore, before I come to speak of the Distempers most liable to the Power of Exercise, I shall take Notice of two or three Remedies, which seem to demand this Sort of Assistance.

The First is, the Decoctions of Woods. It is the general Complaint of those who take these for any Time, that they pall their Stomachs : To obviate which, if it be requisite that a Person should persist in this Course, nothing

nothing can be more proper than Riding, or some other gentle Exercise; because it will keep up the Vigour of the Spirits: And how much the Appetite depends upon that, is easy to imagine, besides that the Intention, the *Diaphoresis* *, is likewise promoted thereby.

Another Medicine which should be followed with Exercise, is the Chalybeate, especially in dropfical Subjects; not for fear it should lie heavy upon the Stomach, as the Vulgar think, but because in these People, the Contents of the Stomach are much rarefied and flatulent, and the Steel is apt to cause Distensions and Gripes, and other troublesome Symptoms; so that it is necessary the whole Body should be well warmed, that those Particles may be dissolved, and the Stomach qualified to bear the Chalybeate: Besides, that acquired Heat will enable

* Sweating.

it, after it comes into the Blood, to display its Effects the sooner, either as as a Corroborative, or a Diuretic. In the hysteric and hypochondriacal Persons, this Medicine gives Trouble after another Manner, by Costiveness, by Head-ach, and heating the whole Body too much: Now all these are much qualified by Exercise; for it will procure a Ventilation of many of those Particles, which the Medicine agitates and throws upon the Membranes.

I might proceed to enquire into the Nature of *Balsamicks*, but that I shall have Occasion, as I proceed, rather to say something against their Use in one of these Distempers, which I shall consider: But if they are to be used, what I have already said in Relation to the Fluids, will shew that a great deal depends upon a proper Degree of Agitation in the Blood, for the uniting and thoroughly mixing the Particles of a Medicine of this Nature,

F... that

that it may be transmitted to the designed Part to some Purpose: And as it would be convenient a Balsamic should be taken in a larger Quantity, if the Stomach of sick People could bear it; so during the Time of Exercise, while the Body is heated, the Stomach can bear a greater Quantity than at other Times, without any Sense of Irritation, or Inclination to throw it up. But I shall forbear to enlarge any more on these Things, and go on to the Distempers which seem most naturally to demand this Kind of Assistance; in treating of which it will be easy to discern in every several Case, how the Gymnastic Part will agree, or fall in with the Pharmaceutic.

CONSUMPTION.

THE First of the Distempers then, is the *Consumption of the Lungs*. I take this to fall under the Power of Exercise, for these two Reasons.

First, Because the morbidic Particles, which are the immediate Cause of the Disease, seem to be of a looser Texture, to be less intimately combined in the Blood, than in most chronical Cases the Particles which occasion each Distemperature seem to be.

Secondly, Because this Case requires the carrying off the acrimonious Particles by equal Secretions, rather than by any one particular Emunctory of the Body.

The *First* Reason seems to appear manifest enough, from the habitual Heat and Disturbance which are generally complained of, sometimes even upon the first breaking out of the Cough, and from the continual Quickness of the Pulse; all which shew, that there is an imperfect Struggle of Nature, frequent and partial Ebullitions, which do not arise to a Degree sufficient to clear Nature of that which oppresses her; but yet plainly indicates, that the hostile Particles do not unite, or accord with the Blood, so much as the Particles of each Disease do in other Cases: As for Instance, in scrophulous, and even in cancerous Cases; though the Blood is loaded with so pernicious, and even corrosive a Humour, yet we find no Disorder in the Beat of the *Artery*, no irregular Heats, but for some Reasons or other in the Make of their Particles, they pass better with the Blood, and the Disease is longer protracted: Now I
think

think it seems to be a natural Consequence, that where there is an Ebullition, or Contention of Particles, there is no Union ; and that a more general and natural Heat, superinduced by Exercise, by the Solids acting uniformly upon the Fluids, may produce a Ventilation of many of those Particles, which Nature contends much with.

The *Second* Reason, *viz.* The Necessity of equal Secretion, is occasioned by the Effects of this hectic Disposition, which by bringing a Langour upon the Spirits, a Relaxation or Flaccidity of the muscular Parts, and even of the Lungs itself, renders Nature unable to bear any particular Secretion without great Disturbance : Thus we see upon the Use of the gentlest purging Medicine, the Cough is increased, and the whole Body for a Time more than ordinarily disturbed ; the same happens upon the Use of *Sudorifics* ; and, in-

F 3

deed,

deed, scarce any particular Secretion can be considerably enforced, without some Inconvenience following upon it: So that it must needs be the most proper Method, if we can attain to it, to enable Nature to do the Work herself, by gentle and even Despumation of the acrimonious Particles, at all the Emunctories.

To procure this good Effect, I propose the first of those Exercises, which I shall consider more amply in its proper Place, which is moderate Riding. This Exercise is undoubtedly the most likely to cause an equal Exaltation of the Fluids, to restore the Tone and Elasticity of the Ducts, so that the hot fretting Particles may be cast off; some of them by sensible Perspiration at the Skin; others by the Kidneys; others by the many *salival* Glands; others by the Glands of the *Intestines*, where the very acrimonious Particles forced out by that Exercise, which
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in a special Manner acts upon those Parts, may be very much altered while they lie in the *Intestine*, undergo a Sort of *Cohobation*, and in all likelihood may some of them become inflammable, and so disposed, as to prove nutritious, when sucked up into the Blood, as some of the Contents of the Intestines always are. This is communicating, *ab extra*, a Power to Nature to act upon herself; which must needs be more agreeable than to put a Force upon her, when she is languid, and not able to master both the Drug and the Distemper.

It would be of great Consequence to People afflicted with this Distemper, if they would be brought to consider seriously the Distinction of the Oeconomy into *the Parts containing* and *the Parts contained*, that is the Solids and Fluids, and the Happiness of being able to exert the Strength of the Solids, and make

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the muscular and nervous Parts assist the Blood and Spirits. There are Distempers wherein a Man is so unhappy, as to have one Part of himself only passive; as in Fevers, the Intenseness of the Heat affects the Spirits and Nerves to that Degree, that all Power of standing or going is taken away: In a Palsy, the Hopes lie all in the Fluids, or Liquor contained: In other Cases, the large Glands are so much altered in themselves, that the Motion of the Body would be to no Purpose: But here, in this Distemper we are treating of, the Case is quite otherwise; if the sick Person will but entertain a Resolution to help himself, will employ all the Springs and Fibres of his Body, and by that Means take the labouring Oar from lying always on the Blood alone, he will have no Reason to despair.

Thus I have considered how the Use of moderate Riding will conduce to the

the conveying off the subject Matter of the Disease. The next Indication is the strengthening the Tone of the Lungs and muscular Parts, which in this Distemper grows flaccid ; I might add of the Stomach too, but that we can help that Bowel by many excellent internal Remedies. Now I would fain know of any Man, how he can reach the Flaccidity of the Lungs by internal Means, till the Distemperature of the Blood is removed, when it will go off in Course ; but would be done much sooner, if we assisted both the Solids and Fluids at the same Time. Now that the very Lungs itself may appear not to be out of the Reach of a Habit of Exercise, let any one consider the Strength of that Part, which Divers acquire by frequent Diving ; or, to come nearer to our Purpose, take any two Men equally used to hard Labour, of equal Strength as near as we can guess, whereof one has accustomed himself to Running, the other has never
done

done so; all the World knows that the practised Footman shall run a great deal farther, and much faster than the other can do; though in the common Sense of the Expression, this latter has a clear Wind, as we say, and is in perfect Health: Which invincibly proves, that the Lungs, though a Bowel, are capable of a Habit; and that, with a proportionable Allowance, the gentle easy Exercise of Riding must introduce a new Habit into the Lungs of a consumptive Person, and so recover the Tone of that Bowel.

I know it will be replied here, that *balsamic* and healing Medicines are supposed to strengthen the Parts they are directed to; that they are generous Medicines, of fine Parts, and consequently fitted to communicate a Firmness, a Spring to the nervous and membranous Parts of the Lungs: And if it could not be proved that they did heal so much as they have been
pre-

pretended to do, I would readily allow they did strengthen these Parts : But I have had some considerable Opportunity to observe the Use of those Medicines, and I never could find that if Alteratives failed, Balsamics would do any great good ; that is, taken strictly as Balsamics, upon a healing Intention. I doubt not, but in the Beginning of the Distemper, as Alteratives, they may be of Service, especially the milder Sort : By the pleasant Sensation they create, and the Consent of the Parts, they will give present Abatement to the Cough ; and when brought into the Blood, may, by promoting a * *Diuresis*, or by precipitating some of the Acrimony, help to carry off the Cause of the Cough, after the alterative Way ; but that when there is any Ulceration in the Lungs, and the Blood is loaded with hot and fretting Particles, they should then heal so much, I cannot

* Discharge of Urine.

conceive. If we will but give ourselves leave to examine a little closely how they act, when externally applied to a Sore, we shall not perhaps find that they are all of them such immediate Healers: Some of them are too fine and stimulating to be used as Eupolotics, but rather prove Digestives; and therefore must be more likely to cause a too great Agitation in the Blood of these People, than a healing of the Ulcer. I know it may be here replied, that they are very proper to cleanse the ulcerated Parts of the Lungs, in order to their better healing; but I cannot imagine how it should come about, that there should be such great need of cleansing the *Ulcuscula* in a Part of so spongy and membranous a Substance as the Lungs, where there can be no Redundancy of *parenchymatous Juices* * to feed the Ulcers: Besides, it is to be considered, that the constant Mo-

* Juices strained through the Intestines.

tion of the Lungs will help to de-
terge the ulcerated Parts: Just as if
we should suppose a Man, that has
an Ulcer in his Leg, should be squeez-
ing the Lips of it together all Day
long, we cannot doubt but he would
by that means work out the *Pus*, the
Slough, and all the Mispurities of
the Sore; and in like Manner, the
Heaving and Subsiding of the Lungs
will hinder any Thing from bedding
or loading itself long in a Part that
is really ulcerated. And alas! here
is the grand Difficulty in a Way to a
Cure; we cannot easily bring so arid
a Substance as that of the Lungs, to
unite when lacerated, because of its
continual Motion; so that there is
all the Reason in the World for us
to heap in only healing Medicines,
strictly taken, without any Thing that
may prove in the least stimulating.
Therefore, whatever Balsamics have
done any great Good, I cannot think
it has been any other Way than by
driving of the Acrimony from the
Blood,

Blood, and not by immediately healing the Part affected; so that though these are noble Medicines in Cholics, and simple Affects of the Stomach, where the State of the Blood is quite different, yet here they are too generous. They are like the Sword of a Giant in the Hands of a Dwarf, that will not help but oppress. And as for the oily Medicines, which may be called a Sort of milder and artificial *Balsamics*, we ought to consider that the Blood is replenished with a better Oil than any we can immediately supply it with; I mean the Fat, which to the Quantity of a Pint at least is continually passing into, and out of the Blood: And yet in this ill Habit of the Body it wastes daily, and does not unite with the other Fluids as in a State of Health. What then can we do by the poor Addition of a few Drachms of unctuous Stuff, which after it has passed the Stomach enters the Blood, to the Quantity of a few Grains, and does
not

not the least good, in Reparation for the Unpleasantness in the taking, and the Uneasiness it sometimes causes in the Stomach of the sick Person?

I hope these Reflections will not be misinterpreted, as if I endeavoured after some little hypothetical Notion, as a Wedge to make way for any Design of mine: They will appear but too real to any that have been conversant with this Distemper. I could wish it was all Hypothesis and Fiction, and that these Medicines would perform all that is expected from them: But then to what must we attribute the Ravage this Disease makes, which is known to all to be a melancholy Truth? Not to the want of *Balsamics* certainly, for both Poor and Rich can make shift to procure enough of them: The Lozenge and Linctus are in every Body's Hand: But this must be attributed to their leading People to take a wrong Aim, to level at the Symptom instead of the Disease.

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Disease. These specious Medicines induce them to be intent on the Cure of that which is most troublesome, *viz.* the Cough, when they should lay the Ax to the Root of the Tree, be more intent on the Cure of the Habit of Body, and not let it be over-run with a poisonous Acrimony. I am confident Legions of the Dead might have been above Ground, if they had but conceived the Fallacy of these Means ; if they had but stuck close to the proper Quantities of any one good Alterative, they might have plung'd out of their several Maladies ; but by placing all their Hopes in Things directed to the Cough, they have fared like the Dog, which bites at the Stone that is thrown at him, instead of biting him which threw it ; not knowing that such diligent plying of these Medicines is a Kind of Embalming a Man before his Death, and an ill-boding Presage, that in a little Time he will be in a Condition to be embalmed after it.

From

From what I have said it is plain, that I take the negative Way (if I may so speak) of curing this Disease, to be the most relied on, that is, the driving the Acrimony, which causes the Cough and other Symptoms, to the several excretory Channels, and clearing the Blood of it: For the Blood, when freed from such acrid Particles, will prove the best of Balsams itself. Therefore the milder Antiscorbutics, the Bitters, Decoctions of Woods, and even the milder Balsams, do all contribute their Assistance upon this Intention, in the first State of this Disease, and do very often secure the Person that makes use of them; and when they have not prevailed alone, if the Use of Exercise had been superadded to them, they would undoubtedly at that Time have been rendered effectual. But yet I am not so bound up in an Opinion, but that I am convinced there is such a Thing as a positive Relief in this Case, in the strict Sense of the Expression;

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pression ; that is, a Healing of the Part fretted or ulcerated: But then I believe it must be done by Things of a milder Nature than our common *Balsamics*. The Waters of our Hot Bath are able to do a great deal, by the healing Okers in which they abound, and there are other Things which seem qualified for this End : But that Qualification necessarily supposing they should be extremely mild and temperate, and, upon the Account of that Temper, it being likewise possible they may sometimes miss taking Effect, it is these Considerations have induced me to apply the Assistance of Exercise to the Temperament of those Medicines, that by such Means they may be rendered able always to answer Expectation. But that both the Nature of the Medicine, and the Assistance of the Exercise may appear the clearer, it will not be amiss to consider two or three of these Medicines.

The

The first of them is a Vegetable, which has always been accounted a Pectoral; but after the Rate we use it, I much question whether it may not be said to be wholly indifferent; this is *Colts-foot*, a Plant seemingly dry, and little likely to effect what I have known it to do.

I shall here venture to give a Relation of some of the strange Effects of it, which are so seemingly incredible, that if I had not a full Assurance of the Fact, I should not offer it; and though it is not of a Cure of the same Distemper which I am treating of, yet I hope it will not be thought a Digression, because the Obstinacy of the Humour, which is the Cause of that Disease which this Herb did remove, is so much greater than in the Case I am upon, that it may serve to give us Reason to expect great Relief from it in the Cure of the Consumption likewise, to which it has always been applied, if used after the

same Manner, and in the same Quantity, as it was in that Case. It was therefore a scrophulous Subject that it relieved; but one so deplorable, that the Hospitals cannot often shew the like. The young Gentlewoman had above twelve Sores upon her; she had had the regular Help of Physicians, but was left off as incurable, when a Person who was no Physician, and did not pretend to any Thing like dealing in Medicines, only he had Reason to know the neglected Virtues of this Plant, came accidentally to the House, when the Gentlewoman's Mother was lamenting her Daughter's Condition. After having given her Reason to expect something from his Medicine, he promised to make it for her; but made her send ten Miles, twice a Week, to his House, for the Decoctions of the Herb, that he might conceal it from them, because he knew they would undoubtedly despise it, if they knew what it was. He therefore made very strong Decoctions of it,

it, till the Liquor was glutinous and sweetish, of which she was to drink as much as she could every Day, at what Times she pleased: This she followed above four Months, in which Time most of her Sores were dried up, and in a little Time more she was perfectly cured. And of this I have Reason to be certain, because I lived in the House where it was made, all the Time; and the Person who made it did not make a Secret of it for Gain, but only that it might not be slighted. This Instance I have thus amply related, that it may serve as a Hint, that this Herb, when it is used as a Pectoral, ought to be used after another Manner than we generally do. And that when we do make use of Vegetables, in a Manner suitable to their Nature, we may find Cause to come to a Temper, as to our Opinions concerning them, notwithstanding the great Plenty of generous Medicines, which Chymistry affords us. I have caused the

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Decoction of this Herb to be made after the same Manner, and have given it where I did expect a Cure, and thought that I had Reason to believe it did in some Measure prove nutritive. And we find by *Reusner*, in his Observations published by *Vel-schius*, that it has been used as an
 * *Analeptic*. He tells that *Hillerus*, the Marquis of *Brandenburg's* Physician, did restore Children out of *Atrophies* † by making them eat of this Herb, fried after the Manner of Clary.

The next Thing I shall take notice of, as peculiarly adapted to this Case, is *Liquorice*. This Plant was ever reputed by the Antients for the greatest Quencher of Thirst in Nature, and therefore they called it *Adipson*; and upon that Account, *Galen* tells us it was given to dropfical People. *Theophrastus* calls it *Scythica*, and *Pliny*

* A Cherisher of the Nerves.

† Consumptions.

gives us the Reason of it, and tells us the *Scythians* were wont to live twelve Days upon *Liquorice*, and a little Cheese made of Mare's Milk; so that it was in Reputation likewise for sustaining Nature, and enabling People to bear Hunger. Its Effects on Pains of the Stomach, the Bladder, and the like, are numerous, and some of them very well attested: And perhaps there is scarce any Alterative that the Antients take more Notice of than this, except their admired *Silphium*. And we may gather from all, that it is one of the greatest Correctors of Acrimony in general, and that it is very temperate and safe, because the Juice of it has been drank in considerable Quantities, and that fermented too. After this Account of it, let us see how we use it: We boil above an Ounce, or an Ounce and a half, in a Decoction of a Quart or two, with other Ingredients. This is a wonderful Concession. But then in our Lozenges, there

we do it to some Purpose: About equal Parts of Juice of *Liquorice* and *Sugar* make up a stupendious Medicine indeed, not remembering at the same Time a good Remark of *Tragus's*, viz. that *Sugar* and *Liquorice* are directly contrary. He glories, speaking of *Liquorice*, that we have found a Sweet that will quench the Thirst, whereas most other Sweets will cause Thirst; and instances in *Sugar*; which if it be true, can any Thing imply more of Contradiction than our Practice? If we were to make Sweetmeats for Children only, it would be allowable to mix all the Sweets in the Universe together: But when the Blood of a poor consumptive Wretch is heated, and loaded with Acrimony, to spoil the most agreeable Drug in Nature, by mixing it with its contrary, only because the Form of a Medicine requires it; this, with all Submission, is what I think cannot easily be excused; this is to cheat People

ple with the *Bellaria* of Physick, and tickle Men into the Grave.

I know what will here be the Objection, *viz.* that these Things are designed only for the Cough, and not expected to cure the Habit of the Body; and that therefore they may be allowed to be a good Sort of Composition, for that palliative Service they are directed to: But this will not suffice, for there is not one in ten that make use of these Medicines, but relies of them for the Cure of the whole Distemper; and therefore this is the broken Reed that has deceived so many, especially of the poorer Sort, and which leads them in such Numbers into the Hospitals, to end their Days there, after they have lost the Opportunities of Recovery, by depending on these Trifles. And if any one must needs take Offence at some of these Expressions, let him consult *Ludovicus*, an allowed Judge of these Matters, in his *Pharmacia Moderno*

Moderno Seculo applicanda; he will find what is his Opinion of these Things, in his 19th Page of his first Dissertation, speaking of the *Confectiones communes & candisatæ, Conservæ Recentiorum siccæ (simplicis sui Pulvere plerumque debiliores) Martis Panes, Pandaleon, & antiquariæ Saponæ Confectionæque reliquæ*, he says, *Væ Hecticis Tabidisque quando tandem ad ejuscemodi Refectiva, Sesamo atque Papavere sparsa, Pineis, Pistaceis, &c. damnantur: Arentis hinc fauces (quamvis difficulter interdum) linitas vidimus, curatum neminem, quin potius intensiores inde depascentes Febres, dejectum magis Appetitum, festinatofque Fluxus colliquativos.** And speaking before, Page 9. of Decoctions and

* Woe to hectic and consumptive Persons when they are condemned to the Use of common Confections, Candies, dry Conserves of the Moderns, (which are much weaker than the Powder of the Simples they are made with) or the *Martis Panes, Pandaleon*, Preparations of Soap, and other Confects of the Antients, mixed with Sesamum, Pepper, Pistachio Nuts, Pine Apples, &c. We see the burning Jaws of the Patient besmeared with these, (and even that is sometimes done with Difficulty) but not one ever cured; their Fevers being made thereby rather more intense, their Appetites more palled, and the colliquative Flux more promoted.

Infu-

Infusions, he says, *Pro certis interdum Circumstantiis in Pectoralibus & Vulnerariis dilutiora hæc contractoribus Dosis commodiora deprehenduntur*.*

And, it seems, he thinks this Observation, relating to the Use of *Pectorals*, to be of such Moment, that he makes it one of the Heads of his *Additionary Comment*, or *Appendix*, where Page 582. he has these Words: *Natura interea nihilominus præ Essentiis Extractisque pectoralibus, præque fauces in internis ibi Ardoribus tantisper lenientibus Morsulis, Trochiscis atque Mixturis antihæcticis, antiphthificis, diffusius quidpiam & ad remotiora perveniens unà ut plurimum velle videtur.*†

These Citations plainly shew, that he thought these sugared Compositions

* In certain Circumstances pectoral and vulnerary Medicines are more commodiously taken in a liquid than a contracted Form.

† Nevertheless Nature seems now and then inclined to prefer somewhat more diffuse, and which comes sooner to the remote Parts, before your Essences and pectoral Extracts, your lenitive Lozenges, which relieve the Mouth in the burning Fits, or your antihæctic and antiphthific Troches and Mixtures.

no apposite Remedy for Persons in such Circumstances, but that whatever Remedy is made use of, it ought to be made to dilute as much as possible; which does agree with the Reason, which I shall shew anon, for the plentiful Use of those mild Vegetables. I have made these Citations at large, that what I have said may not be thought to be any Figment of mine, but that it may appear, that I have Precedent as well as Reason on my Side. But to return to the Root I was upon: --- Besides the mixing of Sugar and Liquorice, to what Purpose is the aqueous Part of its Juice exhaled? What Harm would that soft *Lympha* do to People, who have a continual Thirst upon them? To what Purpose must the Juice be inspissated, in order to acquire an Acrimony by lying, not to speak of its Adulterations? These are Things which I could not forbear animadverting upon, because they put us out of the right Use of a Medicine, than which
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there is not perhaps a greater *Analeptic* to be found, if it were taken in the same Quantity as other Juices are taken. A Medicine that is a Kind of a Balsam *in Fieri*, and the most likely to be wrought up to Perfection in the Blood, and of which the fresh Juice ought undoubtedly be taken to a Spoonful or two several Times a Day. But thus it is, we give any Thing the Name of Physic, and then stand aghast at it, and take it with Guard and Circumspection, as if it were not possible that any Thing should prove a Medicine, and yet be taken in an alimentary Way.

There is another Plant, the *Cynogloss*, which seems not unlikely to be of Use in this Case, because it seems to have something of a like gleamy Substance in it. It has been delivered down to us under some mistaken Notions, as if it caused Sleep, which perhaps have been occasioned by its cooling and styptic Quality: But

a late Author of unquestioned Judgment and Experience has used it pretty much in Decoctions with *Turnips*, and says, it has no such Quality, but recommends it to People in this Distemper. To these may be added some of our Vulneraries, of which there is great Variety of all Rates, of all Degrees of Heat ; and among them one of the temperate Sort, never enough to be valued, *viz.* the *Comfrees*, and which in Consumptions, upon the spitting of Blood, may be expected to do great Things. The Roots may be so managed by a good Hand, as to be eat as Food. The Female Retailers of Physick would perhaps take it ill, if among these Things I should forget their Preparations of *Turnips* and *Snails*, which may all have their Time of being serviceable, either as Food or for Variety ; and, what is more, all these Things are compatible with a Milk Diet too : These Things may be taken in small Quantities, at different Times from the
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taking of the Milk; though if taken with it, they could cause no Coagulation, and so a mild and medicated Chyle may be continually passing into the Blood, to the great Advantage of the Sick.

These Instances are sufficient to shew the Nature of those Things which I take to be the most adequate Remedy in this Case; *viz.* that they ought to be such as are of a Medium between common *Balsamics* and *Acids*, and that they are such as seem most likely to prove nutritive to People in so weak a Condition. The Reason why I set such a Value upon these moderate Things, is taken from the State of the Blood of People in such Circumstances, which seems unable to manage stronger Medicines, the least Tendency to a *Diaphoresis* being some Disturbance to those Persons: So that what is to be done, must be by Things which may suit with the Blood, and, as it were, grow upon

upon it, that it may be transubstantiated into its *Craſis* after an alimentary Way: There muſt be a continual Rill of theſe temperate Juices into the Blood, without the obſerving of phyſical Hours, and then it is to be hoped the Blood may renew by Degrees, and the Acrimony may decreaſe for want of Fuel; and thus we may perhaps better obviate the periodical Ebullitions of the Hectic, by ſubſtracting their Cauſe, than by ſtifling the Hectic by keeping in the Cauſe. I have not Scope here to explain myſelf, but I think the common Cauſes aſſigned for thoſe Fits, do not ſeem ſufficient: I cannot think the Ripening of a Tubercle able to do ſo much; that little Quantity of *Pus* cannot contain a *Putredo* ſufficient for ſuch Effects; not to ſay the ſame Hectic happens, where no Tubercle has broke. To be ſhort, it ſeems to me moſt probable, that when the Blood is ſo much ſaturated with diſagreeable Particles, as in conſumptive Perſons

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it is, these Particles increase and grow upon those Particles which make up the proper, genuine, inseparable Essence of the Blood in its true State : I say, as the first gain Ground, there is so great a Correspondence and Harmony in the Oeconomy, that these latter must contend and resist the other, though in the Contention Nature gains no great Advantage, but only fights and retires till she is quite overcome. This seems to me no unlikely Idea of the Hectic, and if it be true, the best Way must be to subtract the Quantity of the morbidic Particles, by using such a Food as cannot possibly afford Matter for them.

Having then considered these Medicines, I will suppose it granted me, that they are proper in this Case. I will not say that they shall be sufficient to cure of themselves, (though I do not doubt but they may in some Constitutions do the Work themselves) ;

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94 *Of the* CONSUMPTION.

but I will only suppose, that they do greatly dispose towards it; which *Postulatum* will, I conceive, be readily granted me: I will suppose likewise that Riding (the Exercise I propose in this Case) does likewise dispose towards a Cure; which *Postulatum* will be granted too: I will suppose farther, that these two Courses are compatible, and may be used together; as the Medicines help the Fluids and Exercise helps both the Fluids and Solids; which *Postulatum* cannot be denied me neither: What then naturally results from this, but that they be both used in Conjunction? And is it not more than probable, that these two Methods joined, shall effect that which neither of them can singly? Do not we see enough of this every Day, in natural Occurrences, where one, two, or three Things, indifferent in themselves, shall, when blended together, produce a valuable Effect, which none of them could alone? And shall these Things be observed in lesser Arts,

Arts, and be slighted when a Man's Health is at Stake? Seeing we abound so in compound Medicines, why may we not for once take up with a compound Method of Cure, (if I may so speak) that is, if we cannot obtain Health by one Sort of Means alone, why may we not expect it from a Complication?

Thus I have run up these Arguments to a Head: I have shewn that the Medicines appropriated to this Case, ought to be very mild and temperate. Upon the Account of that less prevalent Quality, there may be Hazard, lest they should not always prove equally effectual; and therefore to supply any such Defect, I substitute a most easy natural Gymnastic Course, as a common Aid to the Weakness of the Medicines, and an Assistance to that Part of the Oeconomy, which those Medicines cannot reach. Whether this is not most suitable to, and consistent with the

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even Tenour of Nature, though it may not relish so much of the Magnificence of Art, I must submit to those who are best Judges: To me it seems to promise enough, and carry more Healing with it, than some Things that are dignified with the great Titles of *Gilead* and *Peru*.

If, after all, there are any People who will think I have taken too much upon me, in venturing to attack the *balsamic* Method; if they cannot think slightly of Medicines, which will give such present Mitigation of a Cough, and which are so fragrant and costly; let them enjoy their Opinion, and persist in the Use of them; and if they find them, at any Time, not so effectual as they could desire, let them but superadd the Power of Exercise, and they will doubtless find them much improved; and if they come by that Means to succeed, I shall not envy their good Effects.

Besides

Besides these two main Indications, there is something more to be considered in the Cure of the Consumption; and that is, how we may obviate the Moisture of the Air; which is a very troublesome Enemy to consumptive People, of what Constitution soever, who dare not make use of generous Liquors to fence against it; for that Practice would be prejudicial upon another Account. Now what can be more natural in this Case, than the raising the Spirits to resist this Moisture, by a gentle Motion of the whole Body, which at the same Time causes a greater Degree of Heat, and that equally diffused all over the Body, which must needs rarefy, in some measure, the moist Air, and besides, make the hot and acrimonious Particles in the Blood supply the Place of warm internal Medicines, which in another Person would have been proper to have been given to oppose the Moisture of the Air? Now this is much

the same that the Change of Air can effect in the Body of a sick Person ; for 'tis the equal Influence, the universal moderate Rarefaction of a warm Air, that makes it so beneficial ; and if we will cast in the Benefit of the Tension, which is caused by moderate Riding, together with the Equality of the Heat, it will appear to be very little short of what is usually expected from a Journey into a foreign Air : And I could here give an Instance of a Gentleman, who when he was in the South of *France*, found but little Relief, any longer than when he was on Horseback ; and who, after his Return to *England*, found that Riding supported him as much as the Change of Air : So that upon the Consideration of the equal promoting of the insensible Perspiration, and the Benefit which at the same Time accrues to the solid Parts, this Exercise, which I have so much insisted on, may be allowed to

to be almost, if not altogether, an Equivalent to a warmer Climate.

Lastly, I shall urge but this one more Reason for this Exercise, which is not taken from a natural, but a prudential Consideration, from the particular Humour of most People in this Distemper, who are strangely inclined to think themselves in no great Danger, even though the Distemper is far advanced : They do not love to be told the Truth, though it is ever so necessary : But an honest Physician is to them, as *Micaiah* was to *Ahab*, he never has any Thing good to say of them. They think they are strong enough in the Main. They will tell you, they should be as well as ever, if their scurvy Cough, or the Weight on their Breast was but removed. Now the Genius of the Sick must be considered ; and these People, who have so good an Opinion of themselves, may in some Sense be indulged and wrought upon to exert their imaginary Strength

in gentle Riding, and then they may perhaps come to enjoy that which is real.

I might now proceed farther, to consider in what Degree of this Distemper Riding will be beneficial, whether any Thing is to be expected from it in the second and last State of it: But this would be to run out beyond my Design of Brevity; only I shall take Notice, that it is no rare Thing to meet with Consumptions, without any putrid Fever, or any Reason to believe an Ulcer in the Lungs, or perhaps so much as Tubercles, but a continual Hætic, and a precipitate Waste of Nature, by the direful Acrimony and ill Quality of the *Serum*, as Doctor Bonet, in his *Theatrum Tabidorum* observes, *Page 109. Tabidorum languor sine pulmonum aut visceris cujuslibet corruptelâ tacitâ vi obrepens Anglis infestissimus est, & nisi primis obedi- rit remediis (quod rarissimè evenit)*
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funestus. * In this Case I cannot but be of Opinion, that Riding well managed would be serviceable, though undertook very late, if there is any tolerable Measure of Strength left to put it in Practice.

I must here again repeat, that when I here speak of Riding, I understand the Habit of Riding, the Want of which Distinction, has made it ineffectual to many a Man: He that in this Distemper, above all others, rides for his Health, must be like a *Tartar*, in a Manner always on Horse-back, and then, from a weak Condition, he may come to the Strength of a *Tartar*. He that would have his *Life for a Prey*, must hunt after it, and when once he finds his Enemy give way, he must not leave off, but follow his Blow, till he subdue him beyond the Possibility of a Return. He that

* A languid Decay, creeping silently on, without any Corruption of the Lungs or *Viscera*, is very common to the *English*, and unless it gives way to the first Remedies, which seldom happens, proves of fatal Consequence.

carries this Resolution with him, will, I doubt not, experience the happy Effects of the good old Direction, *Recipe Caballum*: He will find that the *English* Pad is the most noble Medium, to be made use of for a Recovery from a Distemper, which we in this Nation have but too much Reason by Way of Eminence to stile *English*.

OF THE

D R O P S Y.

THE second Distemper which I shall consider as subject to these Measures, is one *Species* of the *Dropsy*; that is the *Anasarca* Kind, from which likewise I except those which are attended with a hard Liver, or a remarkable Obstruction of some of the *Viscera*.

This Kind of *Dropsy*, thus circumstantiated, does at first View seem not to need the Assistance of any extraordinary Means to help towards a Cure, it being the most curable of all Dropsies; and we have daily Instances of its giving Way to common Medicines: Nevertheless there are such Exceptions in the most favourable Case, as give Trouble enough to a Physician sometimes, and requires more than usual Application: As for
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Instance ; sometimes a Person happens to be brought so low by an unseasonable Purge, that afterwards Diuretics and Corroboratives will have no Effect upon him, but the Case becomes deplorable, without the Rupture of any *Lympheducts*, or other the like Difficulty.

Secondly, When People decline in Years, there are some extraordinary Means requisite to make the Remedies exert themselves with like Success as they do in younger Persons.

Thirdly, in HystERIC Women, it is difficult to carry off the Load of Water by common Means, without some such Method as I shall hereafter mention ; because their Spirits are so low, that they can bear no considerable Evacuation.

Fourthly, When a Dropsy comes upon an *asthmatic* Person, there are particular Difficulties arise, and the singular

singular Advantages of constant and gentle Exercise in this Case are universally known.

These four different Circumstances of this Distemper may suffice to shew that I have Colour enough for my calling in the Gymnastic Method in this Case; and it is the first of the Exceptions, I mean the ill Effects which sometimes follow upon the Use of Purgatives, which have chiefly occasioned me to enquire whether we ought in this plain Case, thus circumstantiated, to halt between two Opinions, between Purgatives and Diuretics, without endeavouring to establish a certain Praxis upon just Foundations.

There are none will deny, but Diuretics are the most proper and natural Remedies in this Case, if they would always succeed, because directed to the proper Emunctory, the Kidneys, and because they can go Hand in Hand with the corroborative Medicines,

dicines, to be given at the same Time: I take it for granted therefore, that whenever Purgatives are used in this Case, it is because the Diuretics do not take quick enough, or in order to carry off the Load of *Serum*, that the Diuretics may the sooner display their good Effects, because it will be alledged that the *Serum* becomes soropy and glutinous in the Passages and capillary Parts, that the Diuretics cannot always act upon it. But though this is granted, it will not suffice to warrant the Use of the stronger Purgatives, because their Manner of acting cannot agree with this Distemper, and because those Difficulties objected may be overcome by other Means.

First, The very Nature of strong Purgers make against this Case. It seems very preposterous to have recourse to such deleterious Drugs, to those *Mortis Catapultæ*, (as *Ludovicus* calls the *Efulas*, and such like Purgatives)

gatives) in order to the restoring an impoverished Blood. If they acted only by stimulating the Intestines, something might be said ; but since it is indisputable that they pass into the Blood, and act powerfully upon it, there is no doubt to be made, but they fuse and divide it, and break its Globules, and consequently make as much Water as they carry off ; which is the very Reason why Sweating is laid aside, and Salivation, though they both seem so proper to carry off watery Humours. I know it may be alledged in Defence of these Medicaments, that the 36th and 37th *Aphorisms*, of the *Second Section*, seem to imply, that a sick Person would receive less Harm from them, than one that is in Health ; but yet this will not excuse their Use in our Case, because though the Viscousness of the *Serum* may blunt the Particles of those Drugs for a Time, and hinder them from working so quickly, yet when once they are thoroughly imbibed, and

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begin to exert their Force, they ravage the very Principles of Life, and can by no Means be fit for a Person in so low a Condition. But admit that the Water is carried off by these Means, the Blood will be left as poor, at least, as it was before the Dropsy first appeared, and then how can we be sure the Waters will not rise again? Suppose an *Anasarca* follows upon an *Hæmorrhage*, which is very common, and you draw off the Water by Purging, will not the Person be just in *statu quo*, upon Supposition that the Medicines, in their working, did not impair Nature? But that is not to be granted, because it is impossible to suppose, that such *drastic* Medicines should not prey upon Nature, even while they are assisting her; and can we be assured that the Blood will not run into the same Colliquation it did before? Besides, may there not be some Reason to suspect, that the very Quantity of the *Serum*, supposing it is not too turgid indeed, may

may sometimes be serviceable, to the promoting the Activity of the Diuretic; even as we find in the true *Ascites*, it is of some Use in the Cavity of those Persons, because they often cannot spare it without certain Ruin? We do not know how much the Consistence of the Fluid may conduce to the keeping its homogeneous Particles combined, and we ought to be very tender of doing any Thing that might tend to dissolve the *Cras-samentum*, the Globules, which are, as it were, the very *Semen Sanguinis* (if I may so speak;) for how far Nature would endure such Measures, before the Sanguification would be totally subverted, would require a Dissertation longer than my Scope will permit; but that this is sometimes done, is not improbable, and I take this to be the Case of a young Fellow I knew, who falling into a slight Dropsy, goes to an *Empiric* somewhere about *Whitechapel*, from whom he had a Dose of Pills which gave him

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about thirty Stools, which funk him so much, that his Nails turned black, and he died in two or three Days Time: Here it is very likely the Sanguification was entirely extinct, and the Blood changed into a preternatural Fluid, and all by the great Power of these deleterious Drugs; and though it is likely the Quack did not know the proper Dose of his Medicines, yet one would think, this was no more than what might be expected from ten Grains of *Elaterium*, which yet has been allowed by an eminent Writer.

Besides the weak State of the Blood, the Ventricle is always more or less impaired in this Distemper, and consequently unable to be put to bear the violent *Stimuli* of the stronger Purgers, without Danger of having its Tone irrecoverably ruined.

It may likewise be prudent to forbear Purging in this Case, lest hap-
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ly there should be some greater Obstruction in the Liver, than we are aware on, for then it might be followed with ill Consequences. It is true, if that Bowel is really *Scirrhus*, it may be discerned, or a great Tendency towards it will shew itself sometimes in the Greenness and Virulency of the Bile mixed in the Excrements, together with other Indications ; but a slight Disorder there is not always regarded, and Brick-coloured turbid Urines are so common in all Kind of Dropsies, that we may not discern that the Blood does abound too much with a Bile, and so a Purge given at such a Time may do a great deal of Mischief ; for the Bile is of a light Nature in Comparison of the *Phlegm*, and moves easily, and no Man knows what he does when he rouses it. I knew an ill Accident happen once upon a Purge, given by a very eminent Physician to a Gentleman in a *Faundice*, which put him into the most extravagant and

fatal *Hypercatharsis* : Thus bold Administrations, to such weak Subjects, may be attended with tragical Accidents ; but the milder and gradual Measure may succeed, without such dangerous Risks, if we consider what have been the Difficulties which have lain in the Way, and hindered the Operation of our Diuretics.

The ill Success of our diuretic Method in this Distemper, is very much owing to our giving those Medicines in so small a Quantity, and to our not changing them for some of a quite different Nature, when one Sort used pertinaciously does not take. That the Quantity must be increased, there needs no better Argument, than what is brought for the Use of Purgers ; for if the Blood can dispense with the Particles of a Purgative, it will certainly bear a great Quantity of those which are diuretic only. What Wonders has that Golden Remedy of *Pythagoras* done, the *Acetum Scylliticum*,

liticum, when given to a proper Quantity? And what may not be expected from the *Sal Succini*, which may be given to a Dose large enough to irritate the Fibres of the Stomach, and in some Measure supply the Place of a gentle Purger; but when it is come into the Blood, it may prove cordial as well as inciding? And now I am speaking of augmenting the Quantity of our Diuretics, I can here affirm a very strange Effect that followed upon an excessive Dose of *Millepedes*, in an odd Kind of a Rheumatic Case; for the Cure of which several Things had been tried in vain, by very good Advice. The *Millepedes* were given to a Quantity scarce credible to several Ounces, and gave a Relief in a little Time, that exceeded all Expectation. This, with other Instances, something of the like Nature, every where to be met with, may convince us, that we ought to advance the Quantity of these Medicines; to which if we apply the Use of Exercise,

cise, the highest Advantages may be expected: For to grant as much as the Favourers of the purging Method can demand, that by Reason of the aforementioned Ropiness of the *Serum*, the Diuretics and Chalybeats will but distend the Parts, and make the Juices grow turgid; Is there no Way to remove the Dam, but by shaking all Nature at the same Time? Must we blow up the House to get the Enemy out? To what Purpose do we talk so much of the Animal Oeconomy, if we reduce its Rules to Practice no more than we do? We are taught the Benefit arising from the Constriction of the Muscles upon the Vessels; and can there be any Case which does more apparently call for it than this? When it is hazardous to attempt, by inward Violence, to dislodge the viscous Concretions, certainly it is high Time to do it by muscular Force. This *Hippocrates* seems to be experimentally convinced of, by his frequently inculcating the
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Use of Exercises in this Distemper; *Δεῖ ταλαιπωρεῖσθαι*, you must labour, is his constant Expression, whenever he speaks of the Dropsy; which, whoever considers the Conciseness that is in all the Writings of that great Man, will be apt to imagine that it carries its Weight with it, and implies the absolute Necessity of acting upon the Lensor of the Phlegm, by the playing of the Muscles. Besides, Exercise will help to restore the Tone of the Parts, which is sometimes spoiled by too great a Distension, even so much as to be in a Manner benumbed; which *Helmont* seems to lay much Stress on, when he, according to his odd fantastic Way, calls it the *Anger of the Archeus*, that will not let the Waters pass; and if there is this Kind of spasmodic Effect, in the Parts leading to the Kidneys, then certainly there is as much Reason for one in a Dropsy to get into a Coach upon his taking his Medicines, that the frequent Jolting may assist their

Operation, as there is for one in a Fit of the Gravel so to do. The Heat that is acquired by the Motion of the Body must needs comfort the Parts, and rarify a great deal of the Moisture, so that it may the more easily pass the Membranes, as they are dilated by Exercise ; and if we can, by squeezing, make Water pass through Leather, the whole Skin dried and prepared, may it not much more easily pass the Membranes of a living Animal, when worked and stretched by Motion, and assisted by the Warmth which that Motion produces ? These may be thought little Things by some, but they will be found to be of great Consequence ; by such minute Measures, Nature can produce great Effects ; and by a Neglect of these Things many a great Life has been lost, in Dependance upon something of a greater Name, that has had no Relation to the genuine Proceedings of Nature.

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These are some of the Reasons which have convinced me of the Preference of the diuretic Course, and which I think cannot be overthrown, by all the Examples of the Success of Purgers; because if we compute the ill Effects of them likewise, and set them to balance the Good, the very Cures done by them will seem but as so many *Splendida Peccata*. We ought not hastily to quit safe Means for those which are dangerous, only because they are a little more expeditious: When a Case is within our Reach we ought to establish our Prognosticks upon sure Ground, though they may not be so quick as could be wished. We have other Dropsies that are dubious enough, but in this Case we ought to study to bring Things to a Certainty as much as possible; which how can we do unless our Methods are uniform? It behoves the Patrons of Purgatives to assign some certain Rule to render the Use of them always safe, which seems impossible to be done,

done, and it behoves those who are for insisting on Diuretics, to find out some such Measures, as may make these milder Medicines always efficacious; which is what I have been attempting to do; and which, if I do not flatter myself, I think I have made to appear plain and obvious: For if we cannot arrive at some comfortable Certainty in in this Case, I do not know in what we can do so; for we are so happy as to have those Things as will certainly act upon such a Crasis of the Blood, as will revive and enrich it, when decayed, though not always in the like Space of Time; and when they act too slowly, we can enforce their Virtue by these Ways I have been speaking of.

These Things are no Figment of mine, they have been the Practice of ancient Times, and are so natural a Result from a due Consideration of the Animal Oeconomy, that I cannot enough wonder that in so many
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Discourses upon those fundamental Rules, there has been so little Notice taken of the Effects of the Motion of the whole Individual, as superinduced to the internal Motions, that make up the Oeconomy ; for if this had been duly regarded, it could not but have been reduced to Practice, and applied particularly to the Cure of this Distemper.

Lastly, I know these are hard Sayings to some People, who send for a Physician as one that deals in Charms, and can remove all their Afflictions, while they are wholly passive; and they would take it very ill that they should be compelled to a Sort of Labour, while they carry about them a Load in their Limbs: But yet for all this, Nature will be Nature still ; and if this be her Voice it must be obeyed. He that is in a Dropsy ought to be alarmed, and look upon himself as in something the like Case with those Criminals
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whom the *Dutch*, upon their refusing to work, confine to a Cellar, and let the Water in upon them, that they may be in a Necessity either of Pumping or Drowning. And I believe there are but few, but who, upon their being convinced of the real and surprizing Benefit of these Means, would readily undergo the Fatigue of them; and Things may be so managed, that Exercise may not be so troublesome as the Sick imagine; an easy Pad will quickly grow familiar; and where the Legs happen to be so very much distended, that there may be some Danger, lest the Skin should be rubbed off, a Chaise may serve the Turn.

OF THE
HYPOCHONDRIACAL
DISTEMPER.

THE third and last Case, which I shall expressly consider, is the *Hysteric* or *Hypochondriacal* Case; in the Cure of which, the several Exercises which I shall hereafter recommend, may all be used. This Distemper falls the most under a Gymnastic Method, because the least proper to be treated with much internal Physic. This is a Distemper which will not drive, as we say, but if kindly treated will lead; that is, will not be expelled by Purging, Bleeding, Sweating, or the like, but must be treated by more gentle and leisurely Methods. It is a Distemper of the Spirits, and the Vessels which immediately convey them; and therefore those Means by which they are
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more immediately affected, are the most like to prove beneficial. Here it is, if ever, strictly true, that a little Matter gives the Turn ; but then that little Matter must be equally applied ; we must give an equal Lift to all Parts of the Oeconomy at the same Time ; we must not apply to the Fluids and neglect the Solids. It is the Want of this Distinction, which I take to be the Ground of all our Mistakes in the Cure of this Distemper ; we cure but half the Man. When I meet with a languid hystERIC Pulse, I can easily raise it, and give a full Beat to the Artery, by anti-hystERIC Medicines ; but then what becomes of the Nerves ? They are not much helped by this, but sometimes impaired by it. But then let the same Person have Recourse to some moderate Exercise, his Pulse shall rise as high as upon the Use of Internals, but with this Difference, that the Nerves as well as the Blood, partake of the Benefit. For

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we may distinguish between this natural Advance of the bodily Heat, which is procured by Exercise, and that which is acquired by Medicines, just as we may between the Effects of the kindly Heat of the Sun, and those of an artificial Fire: Now in the Matter of the Vegetation of Plants, and the Management of some Sorts of nicer Workmanship, though the greatest Care and Industry be used to raise a gentle Heat, which to our Senses, and even to the Measure of the Thermometer, may seem equal to that of the Sun, yet it shall never be able to produce the same exquisite Effects, as the Heat of the Sun does. And so we see in this Case, the mildest and seemingly most agreeable Gums, prove Purgers to some of these People; others again cannot bear *Castor*, without some troublesome Inconveniencies; and how much soever some People may be rapt up with their *Sal Volatile*, and such like Preparations, I can perhaps give an Instance
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of more wonderful Relief given in this Case, by a more common Cordial, than ever those splendid Medicines could produce. It may not be amiss to relate it in this Place, because it serves to illustrate my Design, in shewing that nothing that has the least seeming Violence in it, or rather that nothing, which is not very mild and agreeable to Nature, can be of very great Moment in the Cure of this Distemper. The Instance then I mean was communicated to me by an eminent Physician, and very learned Writer, and is this: He was called to see a Maid who had been severely tormented with Hysteric Fits for several Days, and had taken Plenty of the Remedies usual in that Case, without any Effect; upon which he was resolved to try, what a good large Dose of a true generous Wine would do, considering she was a Servant, and consequently could not be supposed to be accustomed to that Liquor, which would

would have rendered his Attempt fruitless, he therefore prescrib'd some Powders of no Efficacy, to obviate the Fancy of the By-standers, and ordered the Apothecary to ply her with some Wine of his own procuring, that he could depend upon, till she had taken a Quantity, which to her might be rekcon'd very large: This succeeded like a Charm; after a good Sleep, she was freed of all her terrible Symptoms the next Morning, tho' before she could scarce stir her Head from the Pillow, but she fell into a Fit; And I have twice had the Occasion to see something of the like Nature my self. The first was, where a large Dose of Wine took off some very ill Symptoms, occasioned by strong Purgers, erroneously repeated in a certain Nervous Case. But the Person had not been used to drink Wine; otherwise it could not have produced such a happy Effect. I instance in these Things only to shew, that the Remedies which are most proper and

adequate to this Case, must be such as have something of an inimitable Mediocrity in them; and that Exercises do produce Alterations in the Body, which resemble the Effects of such a singular and noble Mean, is not improbable, in regard they act so equally (as I observed before) both upon the Solids and Fluids. And one would think the ill Success of any Thing but like Violence, should lead us to some such Measures as these. One would be apt to think, that when a Distemper, which carries as little, or may be the least Danger of Life in it, of any whatsoever, though so very troublesome, when this nevertheless becomes one of the most difficult to be perfectly rooted out; one would think, I say, that this odd Circumstance, so like to Contradiction, should prompt us to look out for the real Reason of it.

Upon these Considerations I cannot but admire, that the same Admini-
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strations, or with very little Difference, (excepting the Chalybeats which may be allowed in both Cases) are thought proper for temperate Women, and Men of Intemperance, when they happen to fall into the Hypochondriacal Affect, as is frequently enough known. One would think that when the Disorder, in these latter, is owing to the Excess of a Liquor, both wholesome enough, and cordial enough in itself, which by its too frequent Use has relaxed the Nerves, and consequently impaired the Spirits, there should be little likelihood it should be removed and taken off by hot Medicines in a solid Form, which perhaps do not differ so much as most People imagine, in their real intrinsic Energy, from that noble Liquid, to which these Gentlemen owe their Malady; I say, one would think that some such Surmises as these should naturally lead us to an immediate Attempt upon the Parts affected, *viz.* the Nerves, which must

be done by Means fuitable to them, that is by Exercife.

Wherever there is a Dejection of the Mind, and a Propenfity to Phantafic and Imaginary Fears, there is Reason to fufpect the Solids, that is, the Nerves, are more in fault than we think for. We may confider that when a Man is drunk, he feldom lofes his intellectual Faculties to any great degree, till the Nerves are quite ftreff'd with the Load of Wine, and his Feet go commonly before his Reafon ; and if this were a proper Place, perhaps I could fhew fome Reafons for us to fufpect the fame in the Deliriums of People in a Fever, that the intenfè Heat muft firft evidently impair the whole Body of the Nerves, before the Underftanding will be quite loft. We don't know what a great deal of Rotation and irregular Agitation the Spirits ftrictly taken will bear, without any Damage receiv'd ; but when the Nerves,
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the Containers of those Spirits, are considerably affected, the Spirits contain'd must partake of the Mischief. We know but little of that inconceivable Connexion of Soul and Body ; but the wonderful Bond of Union seems to terminate very much in the Fibre. For we may observe, that those Poisonous Vegetables which intoxicate, and attack the rational Faculty, do chiefly display their Power on the Nerves, it is in their very Nature, and in the least Quantity to hurt the Nerves ; and when Wine, though in its Quality most agreeable, is by the Quantity and Repetition of it made to be prejudicial to the Nervous System, I cannot imagine how other Cordial Medicines, which must still in some Measure keep up the Stress upon the weakened Nerves, can be the adequate Remedy of this Disease, but that the Nerves must be assisted after their own Way, after a manner suitable to their Nature, that is, by Exercises : For it is, and ever will be,

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one of the Properties of a Fibre, to be the stronger for Motion, the better for wearing; and it is but a Law of Nature, arising from the Necessity of the Constitution, that while the Fluids are continually wasting, and running off the faster, for the Motion of the whole Individual, the other Part of the Constitution, the Solids, the Fibres, should by the same Means reap some Advantages proper, and in some Measure sufficient to balance the Consequences of such a *Dispendium*.

All this receives certain Weight from the Argument which is so naturally suggested to us, by the familiar and daily Observations, which every one cannot but make on the Health of the poorer Sort of People, especially their Immunity from this Distemper: That it is Matter of Wonder that the Spasms, the Tremors, the Shiverings, the Watchings, and all the very numerous Plagues of an
hysterie

hysteric Person, should not be able to rouse People into a Quest of Health, upon Measures suitable to the Causes of Things; that such painful Experience should not animate them into a Resolution to exchange the Pains of a Sedentary, for the Indolence, at least, not to say the Pleasures of an active Life. I am confident no one could forbear making these Inferences, and reducing them to Practice, who has been any considerable Time infested with this Distemper, were it not for the present Comfort and false Hope, which are conceived from some palliative Remedies, in too much Use in this Case; I mean vinous Spirits, and Compositions distilled upon them, which, because in the Beginning of this Distemper they are found to be comfortable and really useful, entice People to have recourse to the Use of them oftener than they ought to do, and in Time seduce them so much by that delusive Flash of Ease, which they give in the first Moments of their Drink-

ing, that they cannot have a due Regard to the Evil Consequences of such a Practice; these Liquors prove a mere Charm, they creep into the Understanding, and teach People to impose upon themselves, and fanfy Excuses for the Use of them, till they come to be so blinded, as they think that Health itself is scarce an Equivalent for the Pleasures which must be deny'd in the Abstinence from them. They who have brought themselves to such a Custom, are not unlike some of our Debtors, who after they have been some Time in a Prison, and learned the Way of living an idle Life upon other Folks Cost, though under Confinement, they lose all Sense of Liberty, and never desire to subsist again upon the severe Conditions of Industry and Labour: And so those who have learned to sip of this Spirituous *Lethe*, quite forget the Value of Health and Strength; they can drown their Vapours, blunt their Pains, and rub on without great Danger

ger a good while ; and therefore as for brisk Exercise, the Cold Bath, and the like, they desire to be excused ; there is too much Danger in the Practice ; there is *a Lyon in the Way*: And thus a sickly complaining Life they lead, because they will not take Courage to use the just Endeavours after a real State of Health. These I take to be some of the Reasons why this Distemper is so seldom totally extirpated, and is become the *Opprobrium* both of the Patient and Physician ; for else it would be impossible, that People should generally resist the Consequence of that Observation which I hinted before : For if the Labour of the Poor generally secures them from this Distemper, and if this Distemper, whenever it seizes, is of so nice and tender a Nature, that it will scarce allow of any of the common Methods used in the Cure of other Distempers ; certainly it behoves the Persons so grieved, to try whether those Means which are preservative to others,

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others, may not prove curative to them; which by reason that the Subject of the Distemper, *viz.* the Spirits and Nerves, are primarily affected by Exercise, prove highly probable. For why there should be such Dependence on Internals universally, and even in this Case, I cannot see; to me it seems almost as ridiculous, as if a Workman should use but one Sort of Tool in working on Wood, Stone, Brass, and other Materials.

I need not here take Notice of any of the particular Symptoms of this variable Disease, they all being liable to the same Regimen; I have already, in another Place, hinted what Relief may be procured by this Method in the hysterical Cholick, and in the obstinate Watchings, which will scarce submit to the Use of *Laudanum*, or at least without ill Consequences. Therefore I shall conclude they all fall under the Power of a resolute COURSE of EXERCISE.

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The Exercifes moſt proper here are *Riding*, and the Uſe of the *Cold Bath*: The firſt prepares for the ſecond ; which Rule, if ſome People who are the moſt weakly would obſerve, they might ſecure themſelves from ſome of thoſe few Accidents that have beſet the too raſh Entrance into the Cold Bath. Inſtead of Riding on Horſe-back, Women may take a Chaiſe, which will allow of ſwift Motion, and comes little ſhort of the Horſe for Agitation of the Body ; though I cannot ſee any Breach of *Decorum*, if a Lady, attended with a Servant, ſhould ride on Horſe-back daily for Health, if ſhe like it beſt. As for thoſe, who upon the Account of their being very fat, have ſome Reason to be cautious how they go into the Cold Bath, leſt ſome Apoplectic Symptoms ſhould enſue, they may have recourſe to another of thoſe Exercifes, which I ſhall treat of, *viz.* the Uſe of the *Bruiſh*, or *Chaiſing*, which if uſed in good Earneſt, will not prove
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so trivial as perhaps some People imagine it to be.

These are the chief Exercises which I would recommend in this Case, and which if used with Prudence and Application, I doubt not are able to effect a compleat and eradivative Cure of this Distemper, as certainly as more violent internal Means are expected to succeed in any other Case; the Spirits and Nerves being not so much more untractable, than the Blood and Humours, if treated after a Manner suitable to their Nature.

What I have said of these three Cases may serve to illustrate the Necessity of this Method in some few other Cases which I need only name; as the *Scorbutic Rheumatism*, which being a Nervous Case, will admit of the three Exercises I have mentioned, which if strenuously put in Practice at proper Seasons, will do Wonders in the removing of those Pains.

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The *Nervous Atrophy* is another Case, which may be removed by a Gymnastic Method, when all the pompous internal Medicines will not avail.

Lastly, There is one more Case, to which Riding seems to be in a peculiar Manner appropriated, and that is, that Decay of Nature which is occasioned by Passions of the Mind, which we commonly call Breaking the Heart. Here the Spirits are broke, and ruined by the Strefs of Thought; the Mind drinks up the vital Fluids, and the Ravage proceeds so fast that nothing can avail, but what can in some Measure interrupt the Eagerness of Thought, and repair in Proportion to the Waste of the Spirits, which Riding seems most likely to do, because it gives an Alacrity beyond that of Wine; because the Briskness of the Motion must take a Man off from close Thinking, and such Exercise continued long, even
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to some Journeys, must, by tiring, incline to Rest, and break off those voluntary Wakings and anxious Thoughts, which are so pernicious; and if some Intervals of Ease can be gained in this Case, there is Hopes that Reason or Religion may take Place, and the Passions may be laid: For it is the first Fury that is the most dangerous and violent; if that can be managed, the Point is gained, and there is nothing like hurrying the Body, to divert the Hurry of the Mind.

These are most of, if not all, the Cases, which fall under the Power of Exercise as curative. As for the Benefit which may be obtained by Exercise, in the Gravel, the Gout, and the like, it is purely palliative, and therefore out of the Scope of my Intention in this Treatise. I shall now proceed to consider briefly, those several Sorts of Exercise, which seem proper to my Design.

And

And here I shall not insist upon the various Exercises of the Antients, or all those in Use now in our Days, but shall make Choice of but a few, that seem most compatible with the Weakness and Infirmities of sick People, and the particular Circumstances of those Distempers which I have already mentioned ; and I shall begin with the Chief of them, which is that of RIDING.

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EXERCISE

OF

RIDING.

UPON several Accounts, this may be esteemed the best and noblest of all Exercises for a sick Person, whether we consider it with Respect to the Body or the Mind. If we enquire after what Manner it affects the Body, we shall find that it is a Kind of mixed Exercise, partly *active*, and partly *passive*; the lower Parts of the Body being in some Measure employed, while the upper Parts are almost wholly remiss or relaxed: Nay where a Man is easy, is sure of his Horse, and rides loose, there is very little Action on his Part, but he may give himself to be as careless almost as if he were seated on a Moving

ing Chair, so that he may be said to be exercised rather than to exercise himself; which makes the Case widely different from almost all other Sorts of Exercise, as Walking, Running, Stooping, or the like; all which require some Labour, and consequently more Strength, for their Performance; in all which the muscular Parts must be put to some Stress, and some of the secretory Vessels made to throw off too much, while others throw off too little; whereas in Riding, the Parts being incomparably more relaxed, there is a better Disposition towards an equal Secretion of the morbid Particles, and a less Expence of the animal Spirits, the chief Agents in all irregular Secretions; so that a sick Person may by this Means be greatly relieved and not tired, whereas by other more violent ones, it is possible he may be tired and not relieved.

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As for the Parts which are more immediately acted upon by this Exercise, it is very plain they are the whole Contents of the lower Belly, so that the Glands of the *Mysentery* and the Intestines, so frequently accused of Obstructions, may in a special Manner be cleared, and their Tone recovered by such repeated Agitation; which is a Thing so manifest and allowed, that it would be needless to multiply Words in the explaining of it. But there is another Sort of Assistance, communicated to the Intestines, which is not so much heeded, and that is the great Alteration, which is made by this Agitation in some of the morbidic Particles, as they come to be squeezed out of their several Glands into the Intestines, which in the Time of Riding is doubtless in a much greater Quantity than at other Times. These Particles must not be supposed to be barely carried off as Excrementitious, but to undergo a Change in their Texture, to be several

veral Times in a Manner cohobated, from acid and acrimonious to be volatified, and in some Measure rendered inflammable. That there is some such Alteration made in the more liquid Parts of the Contents of the Intestines, before they come to grow hard in a true State of Health, is easy to prove, and I believe agreed on by most Enquirers into the Oeconomy of Nature; and that there is some Defect in these Operations of the Bowels, in some sick People, is evident from the Consistence, Smell, and other Qualities of these Contents, different from what they are found in a State of Health; and that this Defect may be removed by this Exercise, seems not improbable, if we consider how immediately Riding affects those Parts, that it acts as a Topic, by those infinite Succussions coming close upon one another, which must needs cause a greater Heat than ordinary, and a better Mixture of some of the similar Particles, and a Rarefaction of

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others,

others, which after they are thus differently modified and altered, are many of them as it were chafed in again by that continual Agitation, and the Stream of their inflammable Parts is of Use, to keep Nature even under the Exercise. That there is something like this to be observed in the Actions of the Bowels, might be confirmed, by what Glysters are known to do. I would not willingly verge towards the Fraud of an Hypothesis: I may be allowed to have had some more than common Occasion, to put me upon making these Observations, having some Time ago been so unhappy as to labour under as severe a Flux as perhaps ever was known, which held me about a Year and a half, attended with Vomitings, and most unsupportable nervous Symptoms; during all which Time nothing relieved me, in the greatest Paroxysms of it, like gentle Riding, in so much that at last I was forced to be in a Manner always on Horseback, to have the Pressure
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on my Bowels rebated, and my Spirits a little refreshed. The Comfort which I found by that Means I think must be attributed to some such *Phænomena* as I have above-mentioned; for though I will grant that Riding was more beneficial to me under those Circumstances than it would be to another, because of those nervous Symptoms; yet how Particles so exquisitely pungent and acrimonious, should be retained and blunted, and made useful, as appears from the evil Consequences of too many Evacuations; how this should come about but after such a Manner as I have above hinted, I cannot understand. It is easy for those who think in haste and superficially, to be deceived with the first Appearance of Things; but when once Men are calm enough, or under a Necessity to think closer, they are more likely to come to the Truth of such *Phænomena* as these; and to those who do allow themselves to deliberate before they are positive, I doubt not but

what I have asserted, will appear reasonable; and perhaps I should not be so much out of the Way, if I should add, that some of the *stercoracious* Part of the Contents of the Intestines, are not in a strict Sense to be reckoned excrementitious or useless; since though I do not believe Digestion is performed by Putrefaction, yet I believe Putrefaction is a great Medium for the opening of Bodies, and the extracting inflammable Parts out of them; as if we see a little greenish *Hay*, when it comes to be putrefied, shall become inflammable; and there being inflammable Particles in the Intestines, it is probable they may owe their Origin to some such Cause, and not to the first Chylification in the Ventricle. I would not be thought to bring these Reasons, as if I believed Riding would cure a Flux; I do not believe any such Thing, unless upon some very singular Circumstances, and therefore I have not placed it among those Distempers which appear

pear to be curable by Exercise; but I only draw this Consequence from the palliative Relief, which Riding will afford in the Time of a long Flux, that some pernicious and disagreeable Particles may receive such an Alteration while in the Intestines, as to become fit to be re-absorbed by the several Vessels of those Parts, and conveyed with great Advantage into the Blood again, which is making Things to go on in a Round towards a Cure; Nature herself doing the Work, without forcible Evacuations, which though never so gentle, in some fine Constitutions can scarce be borne, and without so much Physic, the very morbid Matter being so altered and disposed in one Part of the Body, as to be useful in another. I have insisted the longer on this Point, that I might make it as plain as possible, because I think it of so great Moment in some Distempers and some Constitutions.

What relates to the Breast, I have had Occasion to explain before ; and for the Head, though I cannot say it is so immediately affected by this Exercise as the lower Belly is, yet there is one Benefit accrues to it from Riding, which by Reason of this Difuse of Exercise in Cases of Sicknefs, is not taken Notice of, and it is this, the great Inclination to Sleep, which a sick Man finds if he lies down on his Bed as soon as he comes off his Horse : For as the Motion of a Coach does more or less dispose all People to Sleep, and the swifter it goes, the more we are inclined to doze ; so the Motion of a Horse being swifter, and the Posture relaxed as to the Head and upper Parts, though a Man does not perceive any Thing of such an Inclination, while he is Riding and upon his Guard, without any Thing to lean on, yet there is so much of the Impression of that Motion remains upon him for some Time after he lights off his Horse, that if he throws himself

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presently upon his Bed, especially if he drinks some small Draught of wholesome Ale or Wine first, he will quickly be in a Sleep, which upon several Accounts must then be very beneficial. This is a Truth so certain and so valuable to distressed, infirm People, whose Nights are often more troublesome than the Days, that it is a Wonder what should keep Men from attending to Nature, and falling into such just Measures that Art it self cannot afford. What can be more applicable to all the Circumstances of Consumptive People, than after that by moderate Riding they have disposed the Humours for each Secretion they should by such short and refreshing Sleeps compleat those Secretions; when moreover, by these Means, they may be enabled to deny themselves those latter or Morning Sleeps, in which they are so apt to run into Colliquations. I know some may please to be so witty, as to call this Nursery, rather than a Management

ment worthy of a Physician; but yet I will appeal to any that are sober, calm, and free from Prejudice, whether, if they allow that this Exercise does dispose to Sleep, as I affirm, upon this Supposal, can any Thing more exactly hit the miserable Circumstances of those Persons? To the Sick these little Things are of great Moment, and in such seemingly little Things as these the accurate Management of the Antients consisted, by which they were sometimes enabled to accomplish that which we, for want of those Measures, do sometimes fall short of.

As to the other Property of this Exercise, it may be convenient for me to make some Apology, before I enter upon the Mention of it, because it is such as cannot be well understood, but by those who are conversant with *Sanctorius*, upon one of whose above-mentioned Maxims it does depend, *viz.* upon that which
shews

shews the great Increase of the insensible Perspiration by *Pandiculation* and Gauping. Now I hope the taking Notice of this, will not be thought odd in an Age, of which it is one of the good Qualities, that Men will not take up with the old superficial Way of accounting for Things by occult Qualities, *Putredos*, and the like, but enquire into the *Modus* of the more abstruse Actions of Nature, and will be convinced, that whatever are the legitimate Measures that she takes, they cannot be thought little or uncouth, seeing it is by such *Minima* that she comes to be able to compleat her great Things. If therefore by Gauping, this Perspiration is so very much promoted, as has been discovered, and adjusted by the Experiments of that admirable Author, we may reflect upon how little Things our Deliverance from Fevers and other Inconveniences does depend; nothing being more common upon taking Cold, Surfeits,

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or the like, than for People to gaup often, till the offensive Matter is let out; and consequently it is very apparent, that whatsoever will promote the Pandiculation, must be beneficial when the Perspiration is obstructed; and this, though it cannot be effected by any Internal, may be done by Riding, which will dispose all People, the Healthy as well as the Sick, more or less to it. I know it may be alledged, that all People when they are tired are more or less apt to gaup and retch; but yet it cannot be said, that Thirty Miles Riding is a Tiring to a Healthy Man; and yet let any one observe, if that or less will not dispose all People to this Affect, unless they over-rule it by drinking of great Quantities of good Liquor, which I believe will not always suppress it neither; but for those who are sickly, the least Use of this Exercise disposes them to this Method of Nature, which perhaps no other Exercise will do, unless they are tired
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by it ; which shews how much Riding is preferable to other Exercises for Sick People, because it does some way or other act upon the Secret Springs of Nature, after a more peculiar Manner, and therefore more proper for the promoting that easy and even Evacuation.

There is another Property of Riding, that it always gives a Freshness to the Countenance of those who use it, which lasts for some Time, and will appear upon but once Riding, and the weakest and most infirm Person shall discover something of this in his Cheeks after this Exercise. Now I would fain know what Noble Cordial, whether Solid or Liquid, can do thus ? They may cause a Flushing, but can produce nothing of this Natural Aspect ; and what can more plainly discover to us, that there is something inimitable which results from the equal and gentle Pressures, of the innumerable and invisible

ble *Vascula* of the whole Body together; and that that Action which can produce such an Appearance upon but one single Application to it, may be sufficient to display the greatest and most wholesome Effects when continued on gradually, as it ought to be? And to object against the Certainty of those Measures, because they must be slow, is just as wise as it would be to assert, that the Hand of the Dial does not move, or the Budding Leaf increase, because we cannot discern the Motion of either of them. Nothing certainly could keep us from regarding these Tendencies of Nature, but the excessive Variety of Medicines, with which we are so glozed, that we over-look her gradual Progressions, either to Sickness or Health, and think to force Her in all Cases by the Power of Art; whereas in a great many Cases, she will baffle the boldest Administrators, when by gentle and suitable Means she may be reduced to her true State.

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The Famous *Cornaro's* Case, and many others might be alledged, to shew how great Changes may be procured, by a strict Attendance to the Demands of Nature; and that it is seldom too late to aid her in a natural Way, agreeable to her Weakness, and without the Oppression, as I may call it, at such a Time, instead of the Assistance of much Physick.

Add to all this the Vivacity, the Gaiety, which does always more or less result from brisk Motion: Whether it be caused by the Spirits expanding themselves, or the Fibres dilating themselves, to take in a great Quantity of the Spirits, it is hard to determine, and perhaps of no great Consequence if we could; but that I may represent the Sense we may conceive of this, I think I have no Reason to be ashamed to borrow, for once more, an Illustration from that Noble Beast, to which this Exercise I am treating of is owing. It is a known

known Case then, that if you take a Horse of the best Spirit, and of the best Keeping, provided he is not vicious, as they call it ; if you mount this Horse, and walk him, or keep him to a pretty slow Pace, you will find him quiet enough ; but if you once put him on to a larger Pace, he cannot contain himself, but will grow troublesome, and press for a swifter Career than perhaps his Rider would desire ; which plainly shews, that there is something in the Animal Oeconomy, which *crescit eundo*, which gathers by Motion, and which cannot perhaps be made to display itself so well any other Way : For this must not be thought to be wholly owing to high Feeding, but to the Degree of the Motion ; for the same Sprightliness, or Courage, will appear proportionably in any Sort of Motion : And but a slow Motion in some Cases does not want its good Effects ; those who are Judges of the Art of War, tell us, that it is not
best

best for a Body of Men to stand still and expect the Enemy, but to keep in Motion while they are drawing to the Battle ; and in the Time of a Siege they make it a Rule, to remove their Men from one Post to another, that their Spirits may be kept up by their being in a continual Diverſion. We are as ſubject to the Impreſſions of Motion, as to thoſe of Sound and Harmony, and both are able ſometimes to inſpire a Flaſh of Courage into the Mind that is not to be deſpiſed ; and as one was of Uſe to drive away the Evil Spirit of Old, ſo the other may be of Service to diſpel the Hypochondriac Cloud, the deſponding Imaginations of ſick Perſons : A Man may be able by this Means to rouse himſelf, and ſhake off the *Incubus* of the Brain, that lies brooding of cauſeleſs Fears and Doubts, to the great Hindrance of all his Endeavours after Health. It is no ſmall Matter for a Perſon to hope and believe that he ſhall do well ; it is ſome Advance toward

a Cure to have so much Courage,
 ἢ φόβος καὶ λύπη, &c. *Si metus & tristitia multo tempore perseverent, melancholicum hoc ipsum:** As Hippocrates observes in one of his *Aphorisms* of his *fifth Section*, Fear and Sadness are sufficient to create a Distemper, and therefore may be very well thought to obstruct greatly the Cure of one: Those Passions cause the Motion of the Heart, and the Beat of the *Artery* to be weaker, and consequently more proportionably lessen insensible Perspiration, which depends so much upon the Vigour of that Motion. We see a more than usual Application to Business, and Intenseness of Thought for but a few Days, shall cause an Alteration in the Countenance of a healthful Man, and make him begin to look pale and wan; how much more then must it prejudice a sick Man, to be always musing on his Distemper, which he

* If Fear or Sorrow continue long, they degenerate into Melancholy.

can hardly well forbear neither, when he knows there is real Danger in his Case? But all this Anxiety will be very much prevented and interrupted by Riding, and a Man will naturally come to take heart and think well of his Case, when he finds he can procure such Temporary or Periodical Relief, if I may so call it, such Intervals of Ease, as in the Time of Riding he is sure more or less to enjoy.

These Things are so agreeable to Nature and Reason, that I am confident they cannot but gain reception with those who are acquainted with this Exercise: No Man can be an Enemy to Riding, but he who is ignorant of it; and the Generality of Men are by their Employment and Affairs kept so much from the Practice of it, that they for the most part judge of it by what they have experienced on a Journey, where an indifferent Horse, bad Ways, and other Inconveniences make Riding rather a Toil than a Pleasure: Whereas he who designs

to make his Riding turn to account, must make it a Pleasure ; he must retire to some Place where he can have the open Field for his Range, he must find out a Horse that entirely suits his Humour, and then it will not be easy for him not to delight in a Creature which will perform all he expects from him, that takes Pleasure in what he is put upon, and delights in his Rider ; a Creature which (considering the many other Beasts that are serviceable for Draught or Burden) seems to be made almost only for the Defence, the Pleasure, and Health of his Master ; and which has so many Excellent Qualities above all other Beasts, that there is no Man upon Earth, whose Gravity or Dignity is so great, as not to allow him with some Pleasure to take Notice of them, if the Exercise alone will not satisfy. There is Variety of the Pleasures of the Field, some of which any Man may make agreeable to his Humour ; there is Variety of Chace, both

as the old French proverb says Vio-

Violent and Moderate, a Variety so great, that Providence seems to have appointed it to be subservient to this Exercise, that Men may divert themselves with Pleasures, that will keep up the Vigour of the Mind, instead of those soft effeminate ones, which generally take place, more or less, where this is laid aside. Add to all this the Pleasure a Man conceives when he finds his Health returning, which will make him delight in the Means of his Recovery, and pursue with Cheerfulness that which before perhaps seemed indifferent to him; so that an active Life, when a Man has laid aside his timorous Prejudices, and is let into the Taste of it, will be found not only to have its Advantages, but its Charms too; and he who indulges himself long in it, will think it not a Paradox, that there should be an active Luxury, which may exceed all the passive Enjoyments of Sloth and Indolence. I have insisted the more on the Pleasure, as well as the

Benefit of this Exercise, because there are some Constitutions of so fine a Make, or else so impaired by some Hereditary Stain, that it must be slow and gentle Means that can act upon them to any Purpose, and the taking Pleasure in those Means must greatly contribute to the Relief they are intended to give.

Though what I have said, may, I hope, carry Weight enough with it, to convince any that will give themselves leave to enquire into the Causes of Things ; yet because Examples have so great a Sway with some, I shall add a few Instances of the Effects of this Exercise ; and I shall first relate the History of the Cure of Dr. *Seth Ward*, then Bishop of *Salisbury*, which I have translated from Dr. *Sydenham*.

Nostrorum quidem in Sacris Antistes,
Vir Prudentia, &c. ‘ One of our
 ‘ Prelates, a Man eminent for Wis-
 ‘ dom and Learning, after that he
 ‘ had

‘ had for a long Time given himself
‘ intemperately to his Studies, and
‘ with the whole Strefs of his Mind,
‘ which in him is very great, applied
‘ himself too much to close Thinking;
‘ he fell at length into the Hypochon-
‘ driacal Distemper, which continu-
‘ ing a good while, all the Ferments
‘ of his Body were vitiated, and all
‘ the Digestions quite subverted. He
‘ had more than once gone through
‘ the Chalybeate Course, he had tried
‘ almost all the mineral Waters, with
‘ Purgings often repeated; as likewise
‘ Antiscorbutics of all kinds, and
‘ Testaceous Powders, in order to the
‘ Sweetening of his Blood. Thus,
‘ what with the Disease, and what
‘ with the Cure, continued for so
‘ many Years together, being just
‘ not quite destroyed, he was seized
‘ with the Colliquative *Diarrhæa*,
‘ which in the Consumption, and
‘ other Chronical Distempers, when
‘ all the Digestions are quite spoiled,
‘ is wont to be the Forerunner of

‘ Death: When he at length consulted
‘ me, I presently considered that there
‘ was no more Place left for Medicines,
‘ since he had taken so many, and so
‘ efficacious, to so little Purpose; I
‘ advised him therefore, for the Rea-
‘ sons above-mentioned, to commit
‘ himself wholly to Riding for a Cure,
‘ beginning first with small Stages,
‘ such as were most suitable with so
‘ weak a Condition; in so much, that
‘ if he had not been of a piercing
‘ Judgment, that could discern the
‘ Reason of Things, he would not have
‘ been induced to try that Sort of Ex-
‘ ercise. I desired him to persist dai-
‘ ly in that Practice, till in his own
‘ Opinion he was very well, increasing
‘ his Stages gradually every Day, till he
‘ should come to ride as many Miles
‘ in a Day, as more prudent and
‘ moderate Travellers usually do in
‘ one Day, when upon the Account
‘ of their Affairs they set out on a
‘ long Journey: That he should not
‘ be solicitous, as to what he eat or
‘ drank,

drank, or have any regard to the
 Weather; but that he should, like
 a Traveller, take up with whatso-
 ever he met with. To be short,
 he set upon this Course, gradually
 augmenting the Distance of his Rid-
 ings, till at length he came to ride
 twenty, nay thirty Miles a Day;
 and as soon as he perceived himself
 better after a few Days Trial, he
 was animated with the Wonderfulness
 of the Event, and persevered in
 the same Course for some Months;
 in which Space of Time he rode
 several thousand Miles, as he told
 me himself, until he was not only
 well, but had acquired a strong and
 robust Habit of Body.'

And Dr. Sydenham tells us, in the
 same Place, that he cured some of
 his Relations of Consumptions, by
 putting them upon Riding much, of
 whom he says, that it was altogether
 out of the Power of Medicine to help
 them. *Cum certó sciam me, vel Medi-*
camentis

*camentis quantivis pretii, aut aliâ Methodo, quæcunque demum ea fuerit, nihil magis iisdem proficere potuisse, quam si multis verbis hortatus fueram ut recte valerent.**

A Clergyman, with whom I am acquainted, living in the Country, happened some Years ago to fall into a lingering *Diarrhæa*, which hung upon him some Years, and eluded the Force of the best Medicines of all Sorts, and brought him so low, that he had no Hopes of Recovery left. When he was in this Condition, a Physician of the City advised him to try what Riding would do; not a slight Trial or two, but a close Application to it; and his Physician told me himself, that he charged him to keep to a brisk Motion, and gallop as much as he could, enjoining withal a very strict Diet, that if the Disease should be

* When I certainly knew, that neither by the most costly Medicines, nor any other Method whatever, I could be of more Service to them, than by persuading them, with many Words, that they would be well,

checked by the Exercise, it might not by any improper Food have Occasion to break out again. He set upon this Course in his own Grounds, which are very large and spacious, and by these Means was restored to perfect Health again. It is manifest, this Case was a colliquative *Diarrhæa*, which at a long Run had sunk all the Digestions, and brought Nature into a kind of universal Gleet; so that it came to be properly and solely the Object of Exercise; whereas a new *Diarrhæa* or Dysentery, when the Humours were turgid and acrimonious, is solely the Object of Medicine, and so far from being to be cured this Way, that nothing would be more absurd than to attempt it: For it is the debilitated Fibres that Exercise restores and immediately affects; and whenever Exercise makes an Alteration in the Fluids, it does so by the frequent Working and Constriction of the Fibres, which in a fresh *Diarrhæa*, before the genuine

Acrimony

Acrimony that occasions it is spent, would be to no Purpose.

A *Northamptonshire* Gentleman, who about two Years and a half ago came up to Town, and lived in *Hoxton-Square*, was taken ill, and sent for me: I found the chief Thing he complained of was a Cholic, but he had other Symptoms which made me suspect he was beginning to be cachectic: He was averse to much Physic, and took nothing but the *Elixir Salutis*, which gave him Ease, but he continued indisposed; and seeing he was unwilling to take any more Things, I advised him to ride out a little, he having a good Pad of his own Breeding in the Town. He told me, if he rode at all, he would ride forty Miles. I replied, I thought a much less Distance would serve; and indeed, as much as I was for that Exercise, I thought five or six Miles would have tired him; for he was much weakened, and his Arms trembled

bled exceedingly when he lifted them up, which was caused purely by the Distemper, for he was not given to Drink. However, after I had started that Advice, he persisted in his Design, and in two or three Days set out, and rode, I think, to *Bedford*, or thereabouts, forty Miles in a Day, which, as he told me afterwards, made him so stiff, that he was laid up for five or six Days; but it staved off all those cachectic Symptoms that appeared before, and in about a Month he returned well to Town, and with so florid a Countenance, that it could be owing to nothing but that Exercise; and he continued so for near a Twelvemonth, when these Symptoms of an ill Habit of Body, which I clearly discerned was begun, broke out again, and continue upon him still. This Example may suffice to shew, that the Weakness which People commonly alledge for a Reason against Riding, is no Reason at all; it

it being, in some Sense, their Weakness which makes it requisite.

I will here likewise mention an Instance of the good Effects of Walking, the most common and unpromising Exercise ; which I had from *Dr. Baynard*. About twenty Years ago, a certain Gentleman came from the *West Indies*, for the Sake of our Hot Bath, for the Cure of a Sort of Palsy, which was occasioned by the Dry-Gripes of that Country, a Kind of *Colica Pictonum*, which if not cured in Time, usually terminates in a Palsy: This Gentleman got a Calash to carry him to the *Bath*, but it came into his Head, that he would by the Way try to walk as much as he could, and when he found himself tired, would get into his Calash: Upon this Attempt, he found his Limbs come to him more and more every Day ; and before he quite reached the *Bath*, he was perfectly well. And here it is remarkable, that *Bontius*, as great
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an Admirer as he was of fragrant Exotics, in his *Medicina Indorum*, treating of a Sort of Palsy, which some of the *Indians* call *Beriberii*, not much unlike to, if not the same with that I have lately mentioned, he makes it his first Rule in the Cure of that Distemper, That the Sick should not give way to it, but set upon vigorous Exercise. *Sed hoc imprimis curandum est, ne (si ullo modo fieri possit) te lecto affigas decumbendo; sed vel ambulando, vel equitando, vel simili aliquo motu validiore omni conatu te exerceas.**

Dr. *Baynard* has likewise given me, in the following Letter, an Account of his Recovery from a Consumption some Years ago.

* But the first and principal Care is, if it can any way be avoided, not to take to your Bed, but either in Walking, Riding, or some other robust Kind of Motion, to exercise yourself with the utmost Application.

S I R,

S I R,

IN Answer to your Request, concerning my Illness, as near as I can remember, I here give you in short the Matter of Fact. In the Month of *October, Anno 1694*, I was sent for to my old Friend and Acquaintance, Colonel *Warwick Bamfield*, at *Hardington* in *Somersetshire*; I being then in *London*, and had been very ill all the Summer at *Bath*: My Case was, as I and other Physicians thought, a true and confirmed *Phthisis*; for I had an habitual Heat, and continual Cough, Night and Day; a very quick and frequent Pulse; I spit Blood, and exputed a viscous tough Matter, sometimes green, yellow, and ash-coloured, and that in great Quantity. It would sink in Water, and smell ill and foetid when cast upon live Coals. My Flesh went off, my Stomach decayed, and I had that *Livor Genarum* as tabid People usually have, Night Sweats, &c. So that every Body gave me

me over as lost and gone; but through a constant and cool Regimen in Diet, chiefly Milk and Apples, sometimes with Honey and Sugar of Roses, and a distilled Milk with the temperate and cool Pectorals, together with constant Riding, Night and Morning, in the Air, and that on the highest Hills and Places I could find, I thank God, in two Months Time my Hectic abated, Cough ceased, Flesh came on, and my Stomach returned; and by continual Riding, and other Field-Exercises, I recovered to a Miracle: And this present Year 1705, falling into the same Distemper, I was cured by the same Means, but chiefly Riding. This is very well known, and observed by all that knew me at the *Bath*; and I wish others in my Case and Circumstances, may find the like happy Success. I am,

Dear Sir,

Your Humble Servant,

EDWARD BAYNARD.

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I shall

I shall here insert a Relation of a very strange Cure by Riding, which was communicated to me by Dr. *Sydenham*, the Son of the Eminent Writer of that Name ; who was likewise pleased to acquaint me, that he himself took a Journey into *Scotland*, that he might get rid of a Cough, which seemed to threaten a Consumption, and that his Journey took it off. But the Cure I am going to mention was of a Gentleman who is related to the Doctor, and now living in *Dorsetshire*, who was brought so low by a Consumption, that there seemed to be no Possibility of a Recovery, either by Medicine or Exercise ; but it being too late for the first to do any good, all that was to be done, was to be expected from the latter, though the Doctor did not think that Riding would then do. However, the poor Gentleman seeing there were no other Hopes left, was resolved to attempt to ride into the Country ; but was so extremely
far

far gone, that at his setting out of Town he was forced to be held up upon his Horse by two Porters, and when he got to *Brentford* or *Hounslow*, the People of the Inn, into which he put, were unwilling to receive him, as thinking he would die there, and they should have the Trouble of a Funeral. But notwithstanding, he persisted in his Riding by small Journeys to *Exeter*, and got so much Strength by the Way, that though one Day his Horse, as he was drinking, laid down with him in the Water, and he was forced to ride part of the Day in that wet Condition, yet he got no Harm by it, but came to the above-mentioned Place considerably recovered; where thinking he had then gained his Point, he neglected to ride any more for some Time, but finding himself relapsing, he remembered the Caution which Dr. *Sydenham* had given him at his setting out, that if he should be so happy as to begin to recover, he should not

leave off Riding too soon, for he would infallibly relapse and die, if he did not carry on those Measures long enough ; so he betook himself to his Horse again, and rode till he obtained a perfect Recovery.

And I have lately met with a Gentleman of this City, who, upon the Advice of the same Physician, set upon a Course of Riding, and recovered of a Consumption, in which he was very far advanced ; and had tried a Milk-Diet, and other proper Means, to no purpose, and all along spit Blood very much, This Gentleman set out on a Journey to *York*, and by Riding close Day after Day for about ten Weeks ; in which space of Time, he rode by Computation a Thousand Miles, he returned healthy and well to Town.

It is to be considered from these two last Cases, that the Riding through Variety of Airs in a long Jour-

Journey, is of great Consequence to consumptive People, and is much better than Riding constantly in one Air; besides, the new Scenes that appear every Day in a long Journey, create some sort of Amusement in the Minds of Sick Persons that is not to be thought altogether contemptible.

But I have been the more willing to insert these two last Cases, because they do manifestly justify that well-grounded Distinction, or, as I think I may rather call it, Discovery, of that excellent Physician whom I have so often cited, *viz.* That it may be too late to force any one Secretion to good Purpose; and yet it may not be too late to move all the Secretions of the Body at once, equally and gently by moderate Riding; which I doubt not will be found, by all who shall try it, to be a real Truth, and of the greatest Importance, though it happens to be so difficult of Access to the Understanding of some People,

and so cross to the Expectations of this Age, that there are Thousands of *Naaman's* Opinion to be found; who will chuse to suffer any Thing, rather than to be convinced, that there can be so much Healing in the *Waters of Jordan*.

I could give several more Instances of this Nature ; I could bring the Example of a young Lady, the Heiress of a very eminent Family, who owed what Ease she had under a certain Distemper chiefly to frequent Riding on Horseback, and to whom the being put out of that Method proved fatal, when her ordinary Physician being out of the Way, another, who mistook her Case, took wrong Measures. But I only mention this, to shew that it may not be so incongruous a Thing, and altogether without Precedent, to recommend these Measures in some pressing Circumstances, even to that tender Sex, who, if they knew the surprizing Advantages that
may

may sometimes be obtained by this Exercise, would, I doubt not, break through the Mode to come at them. No Woman living could bear some of the feverer Hyfteric Symptoms, if she knew any Way to get rid of them; and I am widely mistaken if some of those Symptoms do not, as it were, point out to us the clearest Indications for these Measures : As in those Women who have been long distressed and broke with this Distemper, we may observe sometimes, that their Spirits are so scattered, or the Nerves so impaired, that they cannot well bear any Thing that pleases, or displeases very much, without some Disorder ; if they happen to desire a Thing very earnestly, they cannot wait a little while for it, without some visible Uneasiness ; and though they are sensible of this, and their Reason is as strong as ever, yet they cannot command themselves, because the Animal Spirits, the *Medium*, by which the rational Soul exerts it self, are so broke and con-

founded. The same is likewise indicated by those intense hysteric Shiverings, which sometimes, though more rarely, are to be met with. Now if Women, who happen to be thus tormented, believed that a Recourse to this Exercise would relieve them, I leave it to any one to judge, whether they would dispute the putting it in Practice.

What I have said concerning Exercise, I hope may suffice to convince any Man, that the Power of Healing is not confined to the Drug only, but that this Course may come in for a Share also, and be esteemed upon a Level in due Place with common Physick. And if I should venture to say something greater of it, I should not speak my own Fondness or Fancy, but the Opinion of one who is known to have been a very ample Judge of the Demands of Nature, I mean Dr. *Sydenham*; with whose Encomium on this very Exercise, as he has given it

us in his *Dissertatio Epistolaris*, and in his Treatise of the Gout, I shall conclude.

In the first of those above cited Places he has these Words. *At verò nihil ex omnibus quæ mihi hætenus innotuere, adeo impensè sanguinem spiritusque fovet firmatque ac diu multumque singulis fere diebus equo vehi. Cum enim in hac gymnasticæ specie impetus fermè omnis in ventrem inferiorem fiat, in quo vasa excretoria (quotquot fæculentiis, in sanguinis massa stabulantibus, educendis à naturâ instituuntur) sita sint, quæ tanta functionum perversio, aliâve organorum naturalis impotentia vel fingi potest, cui tot succussionum millia eodem die ingeminata, idque, sub dio, opem non attulerint? Cujus calidum innatum usque adeò deferbuerit, ut hoc motu non excitetur & denuo effervescat? Quæ verò sive præternaturalis substantia, sive*

sive succus depravatus in aliquo harum partium sinu recondi potest, qui non hoc corpus Exercitio, vel in statum naturæ consentaneum perducatur, vel quaquaversum dissipetur elimineturque? Quid quod sanguis perpetuo hoc motu indefinenter agitatus ac permistus quasi renovater ac vigescit. And in his Treatise of the Gout he thus expresses himself with some Exultation. Sanè diu multumque mecum reputavi, quòd si cui innotescerit Medicamentum, quod & celare vellet, æquè efficax in hoc morbo (scilcet Podagrâ) ut & in*

* But of all the Methods with which I am hitherto acquainted, there is nothing which so greatly cherishes and confirms the Blood and Spirits, as using the Exercise of Riding freely almost every Day. For as in this Exercise, the lower Belly is almost solely affected, in which the Excretory Vessels, appointed by Nature to carry off the feculent Matter from the Mass of Blood, are situated; what Help may not be expected in the greatest Perversion of their Functions, or any other natural Impotency of the Organs that can be imagined, from so many thousand repeated Succussions in one Day, and those too in the open Air? Can the innate Heat be ever so slackened, that this Motion will not excite and renew it? Can there be any preternatural Substance, or depraved Juice concealed in any Corner of these Parts, which by this Exercise of the Body will not either be reduced to a State agreeable to Nature, or dissipated and rubbed off some Way or another? For as much as in this perpetual Motion the Blood is continually agitated and mixed together, and enlivened as if the Mass was renewed.

*chronicis plerisque, ac est equitatio
constans & assidua, opes ille exin-
de amplissimas facile accumulare
posset. **

* I have long and often thought that if any one should discover a Remedy, and make a Property of it, as efficacious in the Gout and some chronic Distempers as constant and assiduous Riding, he might easily heap to himself great Riches from it.

OF

CHAFING.

THE next I shall recommend, is a cutaneous Exercise; *Chafing of the Skin*, or, as we usually call it, the Use of the *Flesh Brush*. It is very strange that this Exercise, which was in such universal Request among the Antients, of which they have wrote so copiously, have given us so many Rules and Distinctions for the Use of it, which they put in Practice in almost all Distempers, and without which, scarce any Man of tolerable Circumstances passed a Day, either in Sickniess or in Health; I say it is strange, that what was so much esteemed by them, should be so totally neglected and slighted by us, especially when we consider that their Experience agrees so exactly with our modern Discoveries, in the Oeconomy

conomy of Nature *viz.* That there is so great a Disproportion between the Evacuations performed by the Skin insensibly, and all the others, put together; that the first exceeds all the rest by many Ounces. One would be apt to think, that this Theory shall convince us, that the Ancients did find their Account in those diligent Frictions, and that they really answered their Expectations in the several Cases in which they made use of them; and that we, who live in a colder Climate, have much more Reason to expect great Advantages from this Method, if we should use it to some purpose, with Continuation and close Repetition. If a Person happens to be a little more costive than ordinary, what a Concern is he in for it? What Doses of Purging Physick are repeated to take off this supposed Evil; which at the same Time is frequently obviated by a larger *Diaphoresis*, which at such Times is often

sensible, in the Palms of the Hands, and very often not sensible, but yet real, and to the greater Benefit of the Person than a Laxity of the Intestines would have been. But if six or eight Ounces of the *Materia Perspirabilis* is kept in, which is of far worse Consequence than the like Weight of the *Fæces*, no Body is very solicitous about that: And if it discovers itself in a Cold or Head-ach, presently there is a Recourse to Purgatives; and if it be the Summer-Time, perhaps the Purging Waters are drank so long *de die in diem*, till Nature lose the Way she has been accustomed to; and perhaps never comes to be able to make the same Discharges for Quantity by insensible Perspiration, as she did before she was thus violently forced out of her Way. This was not the Way of the Antients; they were for stimulating and soliciting that Part which was primarily defective, that they might reduce it to an Ability to make its wonted

wonted Discharges; so that were there is great Lett of Insensible Perspiration, which in some Cases is easily discovered by the Smoothness and Dryness of the Hands, it is certainly most natural to endeavour to stimulate the Glands of the Skin by Rubbing; which by the Colour it brings into the Skin, sufficiently shews what it is able to do, if used long enough. And certainly we ought to have regard to this Sort of Discharge above others, because it can supply the Defect of others, better than any of the others can supply the Defect of this; and because it is performed by those Vessels, which are by all now allowed to be the grand Emunctory of the Body, that is, by the true Skin, and all its innumerable Glands.

The Reasons are so natural, that I cannot imagine what should have hindered the putting this Method in Practice, in some Cases at least, unless it be, what I have somewhere observed

served before, the general Impatience of most People, who cannot be brought to think well of a Method which does not surprize with some present Alteration ; without considering, that if such a Method will after a Time cause a good Alteration, it is worth their while to wait for it, and perhaps the best Course that the Nature of the Case will admit of. Now that the Efficacy of a *General Chafing* may be made to appear so valuable, as to encourage any one to wait for the Effects of it, let us but consider it in a particular familiar Case, which is the Cure of a *Ganglion*, a Tumour in a Tendon, occasioned by some extravasated Juices between the Coats. This little white Swelling is commonly taken off by frequent Rubbing ; and though no Alteration appear for a Week or two, yet if you persist longer, it certainly vanishes ; which plainly shews, that if *Chafing* can produce such an Effect in a Part which is Cold, and comparatively

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Exanguous, what may we not expect from it, when applied to the *Cutis*, which is so warm and succulent, and ready to give forth such copious Exhalations? This Instance, in my Opinion, does sufficiently illustrate the Thing, though we see the good Effect of it in another Case too, *viz.* the *Rickets*, which is caused by the Neglect of Exercising and *Chafing* the Limbs of the Child, and which every Nurse knows may be Cured by so doing, if it has not been of long Continuance; or at least that those Exercises are equally prevalent with all the Internal Administrations.

If these Things are so, why should not we carry on this Method to some of the other Cases too? Why should not we go to Work even in a true Rheumatism, after the Inflammation is abated, to fetch out the *Mucous Gelatinous* Substance, which has been thrown out into the *Interstices* of the Muscles? This Course would mould

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and break that Viscous Matter, and render it more fit to be absorbed and carried off, or discluded, by dilating the Membranes, and making them more fit for a Transpiration; and withal would secure the cutaneous Parts from too great a Flaccidity, by keeping up the Spring of the small Fibres; whereas warm Fomentations, tho' they procure a wonderful Transpiration, yet they are apt to leave the Part relaxed, and sodden in a manner, if they are applied too often; and thus it is easy to imagine how proper this Course is in the other Nervous Scorbutic Rheumatism, and what good Effect it will produce if used with Discretion, at proper Seasons, with other Exercises likewise.

There are moreover some *Atrophies*, where this is like to prove of singular Use, by Reason of the *στένωσις* (as *Galen* calls it, in his Third Book *de Sanitate tuenda*) the Dryness and Stiff-

Stiffness of the Skin, which at that Time seems to be fixed to the Part that it covers, and not to fit loose as at other Times; and the Pores are obstructed, and the Skin of a different Hue, from what it is in most other Cases. Here it is easy to perceive that *Chafing* must be of wonderful Consequence, the Reason of which *Galen* gives in a Chapter or two in the above-mentioned Book, where he treats expressly of this very Affect.

Lastly, It must needs be very beneficial to those Hysterical and Hypochondriacal People who are very Fat, and upon that Account cannot use much Exercise, and have Reason to be cautious how they venture into the Cold Bath; and therefore I have not perfunctorily advanced this Method, where I have already treated of that Case, but upon good Grounds; as these People cannot well bear any of the sensi-

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ble Evacuations it is but necessary we should have a Recourse to the Promotion to the Insensible One ; and perhaps if we knew the true Cause of that Distemper, it would be found to arise in a great part from some Lett in that insensible Perspiration, and therefore it would be proper to endeavour the Removal of such an Obstruction by outward Means, because so few Internal Ones are agreeable ; and if any one thinks the Breathing, that is caused by *Chafing*, too trivial to be called an Evacuation, they may be fully informed out of *Hippocrates* and *Galen*, that they thought it to deserve that Name, and therefore they distinguished one Degree of it for attenuating of gross Bodies. If therefore this can be brought to appear a sufficient Evacuation for these People, it is certain it is more conducive upon other Accounts ; because it raises and cherishes the Spirits at the same Time. Upon this Account of refreshing the
Spirits,

Spirits, the Ancients made it a great part of their *Αποθεραπεία*, that is, their Method of refreshing *Athleticks*, after their violent Exercises; and every Old Woman now among us, falls to rubbing the Limbs of any Body that happens to be taken with an Hysteric Fit, for it diverts the Spirits from flowing too much to the Parts affected, and long acting upon the Extremity of those most sensible Fibres of the Skin, must needs agitate the Spirits considerably, and give some Strength likewise to those Parts that are so *Chafed*.

A great deal more might be added on this neglected Subject; but I think I have said enough to prove what I above asserted, *viz.* the exquisite Agreement between the Practice of the Antients and our Theory of the *Cutaneous Parts*; and if this will not encourage any to hope for the like Advantage from the same Methods now in our Days, nothing that I can say more will avail.

Of Bearing C O L D.

THE next and last *Gymnastic* Method I proceed to, is the Use of the *Cold Bath*. If any should wonder to find me rank this among the several Sorts of Exercise, they may consider, that it was ever reputed for one among the Antients, and not without Reason; since it makes the Spirits recoil, and act with more united Vigour, upon the Subject-matter of the Disease, and so a Cure may be made by them alone, without any medicinal Virtue received through the Pores, and in other outward and topical Applications. This comes up to the Notion of an Exercise, because it enables Nature to accomplish the Work of healing her self.

I shall not attempt to account for the Advantages of this Practice, because that has been done already so copiously by Sir *John Floyer* and
Dr.

Dr. *Baynard*, and the World has already begun to experience the good Effects of it; and there are Examples enough every where known, to justify the Recourse to it, in the Cases to which I apply it; and it is to be hoped now, that Men will begin to consider the Folly and Mischief of the too warm Regimen which in Health does often prepare them for Sickness, and in Sick-ness does often increase the Disease, and hasten Death; a Regimen which would be much more proper for one that is to have a sudden Passage into a warm Country, than for us who are to prepare ourselves for the bearing of the Cold; a Thing which we cannot fly from, and therefore ought to resist it; and which is not so formidable or dangerous, as for a great while has been thought. The Inhabitants of this Nation formerly went naked, and were more healthy than we are now; and the People of *Canada*, and all the cold Continent behind *Newfoundland*, go much after

the same Manner, without any Inconvenience from it, but are rather fortified against the Accidents they would be subject to, if their Pores were too much opened, and relaxed by too much Warmth; and we may very well distinguish the rational from the savage Part, by as thin a Habit as Decency will permit. It is a strange Thing that People should be fond of suppling their Skins, and keeping their Pores too open; as if a Man did not as really perspire, when there is no sensible Moisture upon the Skin, though not so much, as when he is all bedewed with Exhalations, which should not be sent out in so great a Quantity but upon brisk Exercise. If Men knew how much Sweat impairs the Skin, and enclines it to wrinkle, as *Sanctorius* tells us in one of his *Aphorisms*, they would be fully persuaded, that Nature can make her Discharges by finer and better Ways than those which are so perceptible, and that Flannel is scarce necessary or

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convenient on this Side old Age. The nervous Parts of the Skin have certainly a very great Elasticity, and are capable of being strengthened by good and fuitable Management, even to a Habit, as well as those of other Parts; and we see, that when the Glands of the Skin do throw out a very sensible Quantity of Sweat in some particular Parts, these Parts grow accustomed to the Air, or other Moisture, and receive little or no Hindrance in their Discharges from it; as we see the Palms of the Hands shall sweat copiously, notwithstanding the external Air immediately striking upon them; and none are more strong and healthy than those who are wont to have their Feet wet without changing their Shoes and Stockings for it. The Stomach, placed in the midst of the Body, and consequently exquisitely warm, is so adapted, as to bear large Draughts of the coldest Liquor, without the least Damage, unless the Body has been extremely heated; and

and though its Office seems to require great and continual Heat, yet it is not obstructed in it, by the Admission of cold Things; nor are its Glands benumbed or constringed, so as to hinder the Secretion of digesting Juices: And can we suppose the Fabric of the Skin less perfect, and exquisite, when by its Position it is to be immediately subject to the Effects of the external Air? Can we think its Vessels are not endued with a Strength sufficient to answer the Force and Weight of the incumbent Air? And its Glands of such a Make, as that the Particles they strain shall be of so fine a Texture, as to pass the Skin, when it seems to us to be too close to permit any Transition? We make but indifferent Use of a very good Theory, that *Sanctorius* has furnished us with, if we give way to these Thoughts, and encourage too frequently the promoting of sensible Perspirations, which, be they in never so small a Degree, are the Effect, of
some

of some Violence upon Nature, and consequently not to be compared with the other more even and regular Secretion.

Besides, we may argue from the Effects of too much Heat, and from the Distempers of Hot Countries. To instance but in one Disease, (which when it seizes any one among us, their chiefest Care is to be secured from the Cold) and that is the Cholic, which is the Epidemical Distemper of Hot Countries, not of Cold, and so common at *Surat*, that about Noon the whole Town shall smell of *Assa Fœtida*, which they mix in most of their Dishes, to preserve them from that Tormenting Distemper, which the Heat of the Air doth not exempt them from, but exposes them to it, by rarefying the Blood and Humours, and opening their Pores; by which Method I do not doubt but many a one among us has brought an accidental Cholic to
be

be habitual ; for being scared by the first Fit, they have endeavoured to secure themselves from another, by these very Means which prove most likely to bring it on. If any one thinks this strange, let them remember what happened when Muffs were worn universally : Some Men were wont to let them hang upon their Bellies for the most part ; and I have heard a healthy Man complain, that upon leaving off his Muff for a Day or two after such a Custom, he has been griped ; from which any one in the World will infer, that the keeping the Part too warm, prepared it for the ill Effect of the Air, and that the same may happen in any Part of the whole Body ; so that it is a Folly for People, in most Cases where the Lungs are not concerned, to nurse up a Distemper, which was at first perhaps in a great part owing to a tender Way of Living, and by continuing that Course of Life, must be rather encreased than perfectly rooted out.

out. A great deal more might be urged, if my Scope would permit me, to induce People to believe the good Effects that will follow upon the exercising themselves in bearing *Cold*.

I shall proceed next to shew, what was the Opinion of the Antients concerning Exercise in the Cure of several Distempers, and shall collect their Sentiments as briefly as possible, that, as in a Sketch, they may appear at one View.

THE
PRACTICE
OF THE
ANTIENTS.

WE find then that much about the Time of *Hippocrates*, the *Gymnastic* Method began to be introduced into the Art of Physic. Whether it was brought up by the School of the *Cnidians*, or any other Society of Physicians, or whether *Herodicus* first joined it to the Dietetic, and so brought it into Request, I shall not undertake to determine; but we find by *Hippocrates*, in his *third Book de Dietá, Sect. 12.* that with some Sort of Glory he assumes to himself the Honour of bringing that Method to a Perfection, so as to

to be able to distinguish Πότερον τὸ στίον
 κερταί τὲς πόνες, ἢ οἱ πόνοι τὰ σίτια, ἢ μελείως ἔχει
 πρὸς ἄλληλα; *Utrum cibis superet labo-*
res, aut labores cibos, aut moderate
inter se habeant; * as he expresses it.
 Pursuant to this, we find him, in
 several Places of his Work, recom-
 mending several Sorts of Exercises
 upon proper Occasions; as, *First,*
Friction or Chafing, the Effects of
 which he explains in his *second Book*
de Diætá, Sect. 42. And tells us, that
 as in some Cases it will bring down
 the Bloatedness of the solid Parts, in
 other Cases it will incarn and cause
 an Increase of Flesh, and make the
 Part thrive: For, says he, *Carnes ca-*
lesfactæ ac siccatae alimentum in seip-
sas per venas trahunt, deinde auges-
cunt.† He advises Walking, of which
 they had two Sorts, their round and
 strait Courses. He gives his Opi-
 nion of the Ἀνακινήματα, or Prepara-

* Whether Diet has the Advantage of Exercise, or Exercise of Diet, or whether both mutually agree.

† Flesh, when hot and dry, draws a Nourishment to itself through the Veins, and thence increases.

tory Exercifes, which ferved to warm and fit the Wreftlers for the more vehement ones. In fome Cafes, he advifes the Πάλη, or common Wreftling, and the Ἀεθχεΐρησις, or Wreftling by the Hands only, without coming clofe. The Καρυκναχία, or the Exercife of the *Corycus*, or the hanging Ball. The Χερωνομία, a Sort of dextrous and regular Motion of the Hands, and upper Parts of the Body, fometimes after a Military Manner. The Ἀλίνδησις, or rolling in Sand; and once we find mentioned with fome Approbation, the Ἡπειροὶ Ἰππι, *Equi Indifiniti*, by which I fuppose he means Galloping long Courfes in the open Field. Thefe various Exercifes are more amply defcribed by feveral Authors, and *Mercurialis* has collected a very good Account of them; they may feem ftrange to thofe who do not confider what great Expences the Antients were at in Building Academies, or Places every Way convenient for thefe Purposes;

Purposes ; and as odd as some of these may be thought by us now, they were as commonly practised in those Days, as Cupping is now in our *Bagnio's*. And though *Hippocrates* gives his Direction concerning these Things, after his usual Manner, in short Terms ; yet it is plain he depended much on them, because he so frequently inculcates the Distinction of this or that sort of Exercise, to such and such a Distemper ; and the People of those Times might find greater Benefit from those Exercises, than we do now from some of ours, which I doubt not are altogether as good ; because they applied the Exercise to such or such a Medicine as the Physician thought fit, which gave it a greater Energy ; and after its Operation, had recourse to another milder Method, to take off the Heat or Disorder, which might have been caused by the Medicine. In these Practices they were so dextrous and successful, that though their *Ætiology*,
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strictly taken, was wrong ; yet if a Man diligently attends to their Reasoning from Effects, he may be satisfied, that they were able, by these Methods, to do some wonderful Cures ; and indeed, they sometimes had such surprizing Success, that the abovementioned *Herodicus*, an eminent Master of Exercises, thought he could cure all Distempers by those Means, and went empirically to work upon the Bodies of those who put themselves under his Care, and was so extravagant, as to attempt to cure Fevers by such Methods for which he is ridiculed by *Hippocrates*, in the *Sixth Book* of his *Epidemics*, and the *Third Section*.

As for *Galen*, he follows *Hippocrates* in this, as close as in other Things, and declares his Opinion of the Benefit of Exercises, in several Places. His *Second Book*, *de Sanitate Tuendâ*, is wholly upon the Use of the *Strigil*, or the Advantage of Regular

gular *Chafing*. He has wrote a little Tract, *de Parvâ Pillâ*, wherein he recommends an Exercise, by which the Body and Mind are both at the same Time affected. In his Discourse to *Thrasibulus*, which is a Dispute, whether the Preservation of the Health properly belongs to the Art of Physic, or to the Gymnastic Art, he inveighs against the *Athletic*, and other violent Practices of the *Gymnasium*, but approves of the more moderate Exercises, as subservient to the Ends of a Physician, and consequently Part of that Art.

The other *Greek* Writers speak much the same Thing, and the Sense of most of them, in this Matter, is contracted in *Oribasius's* Collections: I shall only take Notice, that they relied much on Exercise in the Cure of the *Dropsey*, wherein we almost totally neglect it. *Porro motus si quid aliud* (says *Trallian*, one of the latest of them) *Hydropicis conducit præcipuè*

*qui fit per mare, equum, & lecticam; iis autem qui viribus constant, etiam itio est utilissima; ** which is no more than what *Hippocrates* has advised before, in his *de internis Affection. Sect. 28.* He orders for one that has a Dropſy *ταλαιπωρεῖται περιόδῳσι πολλοῖσι δι' ἡμέρας, Laboret circuitus multos de die. †* And he makes use of the same Word in his *Epidemics*, and almost always when he speaks of the Regimen of a Dropſical Person, implying that though it be a Labour for such People to move, yet they must undergo it. And this is so much the Sense of *Hippocrates*, that *Monſieur Spon* has collected it into one of the new *Aphorisms*, which he has drawn out of his Works. *Celsus* ſays of this Caſe, *Concutiendum multā gestatione corpus est; ||* and in another Place, *Facilius in servis quàm in li-*

* Certainly Motion, if any Thing, is of Service to Dropſical Persons, eſpecially that at Sea, on Horſeback, or in a Sedan; and to them who are able, even Walking is very uſeful.

† Let him take many Turns every Day.

|| The Body ſhould be ſhaken with being much carried.

*beris tollitur, quia cum desideret famem, sitim, mille alia tædia, longamque patientiam, promptius his succuritur, qui facilius coguntur, quam quibus inutilis libertas est.**

I have made Choice of these Citations, that I may not be thought to have applied the Use of Exercise to the Cure of the Dropsy, without Precedent; and if the Antients in their Practice found the good Effects of it, we have much more Reason to expect greater Advantage from such Measures, since we have a Medicine we use in this Case, which seems particularly to demand it; I mean the Chalybeate, of which I have already spoke elsewhere.

But to return to my former Design. Not only the *Greeks*, but the *Latin* Writers also, are full of these Methods. The *Romans* rather ex-

* It is with less Difficulty removed in Servants than in Free Men, because when it induces Hunger, Thirst, and a thousand other Grievances, requiring long Patience, those are more readily relieved, who are more easily compelled, than those whose Liberty is of no Service to them.

ceeded, than came short of the *Greeks*, in the Prosecution of *Gymnastic* Courses; and *Asclepiades*, who lived in the Time of *Pompey* the Great, was the Man who brought them into the most Universal Request. He called Exercises *the common Aids of Physic*, and wrote a Treatise, *De Frictione & Gestatione*, which is mentioned by *Celsus* in his Chapter *de Frictione*, but the Book is lost. He carried these Notions so far, that he invented the *Lecli Pensiles*, or Hanging Beds, that the Sick might be rocked to Sleep; which took so much at that Time, that they came afterwards to make these Beds of Silver, and they were a great Part of the Luxury of that People. He had so many particular Ways to make Physic agreeable, understood so well the *Τὸ Βέλτιον* of his Profession, was so exquisite in the Invention of Exercises to supply the Place of much Physic, that perhaps no Man in any Age ever had the Happiness to obtain so general an Applause,

plause, and *Pliny* says, he by these Means made himself the Delight of Mankind.

About his Time the *Roman* Physicians sent the consumptive Patients to *Alexandria* in *Egypt*, and with very good Success, as we find by both the *Plinys*. This was done partly for the Change of Air, but chiefly for the Sake of Exercise by the Motion of the Ship; and therefore *Celsus* says, *Si vera Phthisis est, opus est longâ Navigatione* *: And a little after he makes *Vehiculum* & *Navis* to be two of the chiefest Remedies; and I am apt to believe they were the more inclined to make use of the Sea-carriage, as an Exercise, for the sake of the Vomiting, which happens at the Beginning of it, that they might thereby supply their Want of gentle Emeticks, which at Times are so beneficial in that Distemper, in

* If it be a true Consumption, a long Voyage is necessary.

which scarce any of the Emetics which they then knew, can be used with Safety, and it was a great Part of their Industry and Sagacity to make good what they wanted in Pharmacy by other Means. As for the other more common Exercises, they were daily practised; as it is very manifest from *Celsus*, *Coelius Aurelianus*, *Theodorus*, *Priscianus*, and the rest of the *Latin* Physicians. And we do not want Instances of the Cures wrought by these Means. *Suetonius* tells us, that *Germanicus* was cured of a *Crum Gracilitas*, as he expresses it, I suppose he means an *Atrophy*, by Riding; and *Plutarch*, in the Life of *Tully*, gives us an Account of his Infirmitie, and that he recovered a great Measure of Health by Travelling, and excessive Diligence in Rubbing and Chafing his Body; and he himself in his *Brutus*, seu de claris Oratoribus, relates his Case, that he was so weak that his Friends and Physicians advised him to leave off Pleading, which

struck

struck him so, that he thought he would undergo any Fatigue, rather than lose the Glory of his Profession, and so betook himself to Travelling, which with other regular Courses brought him to his Health again. *Pliny, Lib. 31. Cap. 6.* tells us, *An-næus Gallio*, who had been Consul, was cured of a Consumption by a Sea Voyage; and *Galen* gives us such Accounts of the good Effects of particular Exercises, and all People so unanimously applied themselves with Patience and Resolution to these Practices, that it cannot be supposed but they must have been able to produce great and good Effects.

If any one should ask me, how it comes to pass that Riding, which I have substituted as equivalent to any or all the Exercises of the Antients, in the Case of Sicknes, was so little regarded by their Physicians, but other less valuable Exercises insisted on; it may be replied, that the Antients

tients could not recommend Riding to weak People, because of their Manner of Riding. They had not the same Convenience as we have; for in those Days they rode without Stirrups, which must needs be tiresome to weak Persons. We find by comparing of Medals, that the Stirrup was an Invention of a much later Date, than any of the Authors I have quoted, I think by about seven hundred Years; so that Riding was only an Exercise for healthy and strong Men: Besides, Horses were not so common in the *Levant*, or in *Italy*, as they are with us; they were reserved for military Men, or at least for Men of plentiful Fortunes, and the Ases and the Mule served for common Carriage. The Horse was a formidable Creature to People that were not accustomed to him, and especially to weak Persons. We see such a jolly Fellow as *Martial* could advise his Friend *Priscus*, to have a Care how he hunted, *Lib. xii. Epig. 14.*

*Parcius utaris, moneo, rapiente veredo
Prisce, nec in lepores tam violenter
eas.**

And in the Close of the Epi-
gram,

*Quid te fræna juvant temeraria! sæ-
pius illis,
Prisce, datum est equitem rumpere,
quam leporem. †*

And that this Humour still remains
in those Countries, though we have a
better Way of Riding, is evident from
Dr. Baglivi, who tells us in the *Co-
rollaries* of the 8th Chapter of his
First Book, de Fib. Motrice, That he
cured two Hypochondriacal Persons,
hominem nobilem ac alium divitem,
a Gentleman and another rich Man,
that he says were desperately ill, by

* More moderately use the Running-Horse,
Nor after Hares so swiftly urge thy Course.

† Of Reinless Steeds it oft'ner is the Share
To break the Hunter's Neck, than kill the Hare.

Riding on Asses in the Country Air; and I believe all will agree to think they were desperately ill, who could dispense with the Ass-trot, when their Circumstances would have afforded them the Carriage of a better Creature. The *Italians* plainly discover, likewise, how little they are addicted to Horsemanship, in that Proverb of theirs, which says, *That a galloping Horse is an open Sepulchre*; and according to this Opinion they manage their Horse-Races at *Florence*, for they make their Horses run without Riders upon them, something after the manner of a Paddock-Course; and to make them run the faster, they clap a Saddle upon them covered with a sort of Tinsy Stuff, that may make a fluttering with the Motion of the Horse, and fright him that he may run the faster; and instead of Stirrups there hang down Straps from the Saddle, at the End of which, there are Balls full of sharp Spikes, which leap up and down, and prick the Horse as he

he runs. This ridiculous Way of Running their Horses, shews how great is the Prevalence of that habitual Timorousness, which keeps them from the Enjoyment of the best and most useful Sort of Riding, as the Antients could distinguish very well; as we find by *Oribasius*, in his Chapter *de Equitatione*, who, after he has said, that Riding slowly was tiresome, (which was for want of Stirrups) he goes on to tell you: *Si vehementer impellatur (viz. Equus) quamvis totum corpus laboriosè concutiat, tamen aliquid utilitatis affert, siquidem magis quam omnes aliæ exercitationes, corpus & præsertim stomachum firmat, & sensuum instrumenta purgat eaque reddit acutiora.** This is a sufficient *Encomium* of Riding, coming from the Mouth of one of the Antients, who relied so much upon other Exercises,

* When a Horse is put on the Stretch, though he violently shakes the whole Body, yet this brings some Advantage, for it strengthens the animal System, especially the Stomach, and purges and sharpens the Organs of the Senses, beyond all other Exercises.

though we in these Northern Parts want no Recommendation from them, of a Thing so much experienced by ourselves; only we slight and neglect this Advantage, as we do many others, because it is common.

I have now, with sufficient Brevity, considered how much the Antients depended on the Assistance of Exercises in their Practice; and I leave it to any one, that is not prejudiced, to judge whether this may not pass for one Reason, why they cured so well with so bad a Theory, and such indifferent Materials; when we, with our Circulation and splendid Pharmacy, are not perhaps able to out-do them proportionably to our larger Acquisition of Knowledge: I say, I think this may be one Reason, for I know there is another may be alledged likewise, and I think I speak without any undue Aggravation.

The

The Power of Exercifes used at proper Seasons, and with great and exact Patience, must needs be very great; and if it be true, that in the *Roman* Commonwealth, there was no professed Physician for the first five hundred Years, there is no Way to account for it but by their incredible Temperance, and Variety of Exercifes. The few chronical Distempers they had among them, were, in all likelihood, for the most Part subsequent to acute Distempers, which no Temperance can always prevent; and the little vegetable Physic, which they could not but know, with their resolute and indefatigable Application to some of their Exercifes, might suffice to help them to get clear of them. This may perhaps by some be thought rather a Gloss than an Argument, who do not duly consider their wonderful Patience in this Respect. The *Pletherismus*, and *Pitylismus*, two odd uncouth Exercifes mentioned by *Galen*, are sufficient to

con-

convince any Man, that they that would heartily drudge at them in the Middle of the *Stadium*, would do any Thing that was possible to recover their Health, and might expect the very utmost Benefit that could be obtained from the various Motion of the Whole, or any Part of the Body.

I will grant that they carried these Things too far ; the whole Education of the *Athletæ* was blameable. I will grant likewise, that they were too nice in the Exercises for the Preservation of Health. I cannot admire *Pliny's* Course of Life which he gives us an Account of in the *thirty-sixth Epistle* of his *Ninth Book*. *Ubi hora quarta vel quinta (neque enim certum dimensumque tempus) ut dies suasit, in xystum me, vel cryptoporticum confero, reliqua meditor & dicto, vehiculum ascendo: Ibi quoque idem quod ambulans, aut jacens, durat intensio, mutatione ipsa refacta, paulum redormio, deinde ambulo, mox orationem Græcam*

cam Latinàmve clarè & intentè, non tam vocis causâ, quam stomachi lego, pariter tamen & illa firmatur; iterum ambulo, ungor, exerceor, labor. Nor can I approve of Spurinna's abundant Regularity, as Pliny relates it. In his first Epistle of his third Book, he tells us, thus Spurinna managed himself: Ut manè lectulo contineretur, hora secunda indueretur, ambularetque millia passuum tria; mox legeret, vel colloqueretur; deinde consideret, tum vehiculum ascenderet; peractisque ita septem millibus passuum, iterum ambularet mille, iterum resideret, vel se cubiculo aut stylo redderet: ubi hora balnei nunciata foret, (quæ erat hyeme nona, æstate octava) in sole, si caruisset vento, ambuleret nudus; dein pila moveretur vehementer, & diu; postmo-*

* When till the fourth or fifth Hour (for I am not always exact in my Time) as the Day permits, I have conferred in the Gallery or Cloyster, the rest I meditate and dictate, and ascend my Vehicle; where, as well as walking or lying, the Tension continues, being relieved by the Change. I sleep a little; then walk; then read a Greek or Latin Oration clearly and distinctly, not so much on account of my Voice, as of my Stomach, though that also is greatly assisted by it. I walk again, am anointed, perform my Exercise, and am washed.

dùm lotus accumberet, & paulisper cibum differret. * This is a great

deal too much ; this is over-doing ; Life is not worth such anxious Regularity : A generous Negligence is much more preferable in a State of Health ; but if a Man happens to be seized with a Distemper of such a Nature, that Exercise is absolutely necessary to the Removal of it, he would be wanting to himself, and very much to be blamed, if he should think any Fatigue too great to be undergone for the Sake of a Recovery ; and I fancy there's scarce any Man in this Case, but would take Pains enough, provided he thought they would not be in vain, which most People are now apt to suppose, because the World

* He rose early ; dressed himself at the second Hour ; walked three Miles ; then read or conversed ; then meditated ; then rode seven Miles, and walked one ; then sat or lay down. When Bathing-time came (which was at the ninth Hour in Winter, and the eighth in Summer) he walked in the Sun naked, if there was no Wind ; then exercised himself well at the Javelin ; after which, being washed, he sat down, and waited some Time for Supper.

has lost the Sense of the Efficacy of Exercise, since the *Goths* over-run the Southern Nations of *Europe*, and abolished and suppressed many of their Customs, that they might the easier introduce their own. So that in this Respect we are in opposite Extreams ; if they prosecuted these Measures too much, we do too little ; and I am very sensible how difficult a Thing it is, with the best of Arguments, to influence those who are propense to the contrary of what you propose. And we are so habituated to other Methods and other Expectations ; have so many Conveniencies for Support and Palliation under a Sickness, that most People are supinely content rather to rub on in a sickly Condition, that does not carry the greatest Danger with it, than resolutely to endeavour, by vigorous Means, to be quite delivered from it. And if it be a Distemper that threatens immediate Peril, these Means are presently thought too trivial to have

any Weight in the Cure, and People can with more Ease despair of Help, than struggle with Pain, in Hope of an uncertain Cure; so that in some Cases, it may be very well said of the Wise, the Rich, the Valiant, and the Mighty, as was formerly said of one of King *David's* Generals, who, because he was killed upon a Surprize, (which yet no human Precaution can always prevent) was lamented with that severe *Epicedium*, *Died ABNER as a FOOL dieth.*

Of the ITCH, and other Cutaneous Eruptions, &c.

THE AUTHOR'S CASE.

I Did not design, either when I began or when I ended this Treatise, to add the following Account of my own Distemper, which gave the unhappy Occasion of many of these Observations; both because it is no new Thing for nervous Cases to vary extremely in their anomalous Symptoms, and because the Rise of the Distemper was eminently owing to my own Rashness and Folly: But having since been importuned by some of my Friends to make it publick, I have been the more easily prevailed with so to do, because I perceived there scarce ever was any Instance, either among the Antients or in our Days, which does so palpably illustrate the Power of my Subject.

My

My Distemper was caused thus: I happened several Years ago to catch a certain cutaneous Infection, more troublesome than dangerous, and which I might easily have got rid of, if I had had but so much Prudence or Patience as to have submitted to the common, though not very agreeable, Method of Cure; but I must needs take to a more cleanly, but desperate Course, by making an Application to my Skin of a Substance well charged with a dangerous Mineral, and which I used to such a Time, and after so extremely rash a Manner, as I believe never one did before me: I wore it for several Months by Times, keeping it on till the Humour disappeared, and then leaving it off till it broke out again: Thus I did till I began to consider that this would not last always, and so I quite laid it aside. But the Mischief was begun, though I was not aware of it; for about a Month after I had left off that pernicious Practice, I waked one Morn-
ing

ing with an universal Giddiness, and a little Time after, I found several Convulsions begin to come upon me, not only slight ones, in the Capillary Arteries of my Eyes and other Parts, but some deeper; as sometimes I should have one of my Hands drawn in, and my Fingers brought to the Palm of my Hand involuntarily. When I found Things thus, knowing what I had done, I was not a little terrified, as any one may imagine; but by applying to a good Physician, by the Help of Bleeding and other proper Means, the Severity of the Symptoms went off, and I remained only with a Giddiness, which was very troublesome, but notwithstanding which, I might be said to be in pretty good Health, as having a good Habit of Body, and being more strong and robust than many People that are free from such an Inconvenience. Thus I continued for several Years without any great Alteration happening, except that once upon

Drinking the *Bath Waters* too long, that vertiginous Rotation was so increased, that I was laid up for a Month with it, being scarce able to go about without staggering like a drunken Man. This, considering the Strength I had notwithstanding, made it reasonable to suspect, as most that I consulted did, that there might be some Mercurial Particles lodged in some excretory Ducts of my Brain: But this Extremity abated, and I remained healthy under that Giddiness for several Years, till happening once to be more indisposed than usually, upon the taking of a Chalybeate, the Humour struck deeper into the Nerves of the Pectoral Muscles, so that I found my Shoulders sometimes begin to be contracted involuntarily, and upon walking, I found a Shortness of Breath, which I could plainly discern was caused *ab extra*, that is, by the preternatural Pressure of those Muscles upon my Breast, which I have sometimes resisted even so far, when

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it has happened to come upon me in the Streets, before I could get to a House that I knew, that it has made my Eyes flash, and has brought other Epileptic Symptoms upon me, inso-much, that I have been forced to take into a Shop, and desire leave to rest me for a Time. These Things continued on me a Year or more, during which Time, if I had then known the Prevalency of Riding, I might have prevented a long Scene of Sickneſs ; for declining under these Spasms of my Breast, I was at length quite confined to my Home, for near Three Months, all the while growing worse and worse, in Spite of the Power of any Medicines I took ; when it happened that I was casually directed to the Use of Riding, by the great Alteration I found in me, upon being one Day carried out in a Coach about a Quarter of a Mile, when I was in that low Condition. That made me reflect on some of Dr. *Sydenham's* Notions, which, like others, I had
before

before slighted and disregarded, and I determined to try what Riding would do; in order to which I removed to *Hampstead* for the Convenience, where I rode at least twice a Day for the Space of seven Weeks, without so much as intermitting one Day: And I had Encouragement enough to keep close to it; for I found as manifest a Progress in my Recovery, as ever was discerned in any Thing that is either natural or artificial; and I cannot here omit one Thing very remarkable, and which gave me the greatest Assurance of Success, and which shews beyond Contradiction, how peculiar this Exercise is to Cases of the Nerves: After I began to ride, I found constantly upon the Use of that Exercise, a Tingling in the Ends of my Fingers, which was accompanied with a Sense of a gentle glowing Heat; and, as I grew stronger, and persisted in those Means, I perceived this Sensation proceed farther, for then I felt it in the
Crown

Crown of my Head, and at length in my Tongue, in my Eyes, and at last all over my Body. This I acquainted my Physician with, who thought it a certain Pledge of my Recovery, as being assured that it was caused by the Spirits recovering the Passage of the Nerves as in a State of Health, and so it proved ; for as they passed farther and farther in the same manner, the Sense extended it self to my Waist, where I should have, after Riding, a Sense of Tingling and Heat, as strong as if I had exposed my Breast to the Sun, or poured warm Water upon it. Any one may imagine what a Pleasure this must needs be to one in my Circumstances, to find myself, as it were, *Renasci*, and all the Parts of my Body gradually receive a kind of New Life. By this it is plain, how much I was relaxed before, and how agreeable to the Nature of the Nerves that most excellent Exercise is. This *Phænomenon* has given me very serious

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Reflections, when I have known some who have stood almost in as much need of the same Measures as myself, though their Indispositions have risen from different Causes, and in whom, in all likelihood, the same Method of Riding would have produced some of the same hopeful Symptoms ; I say, it has given me serious and troublesome Reflections, when upon such Occasions, I have not thought it proper to recommend the same Means, or shew the Reason why I would recommend them, as being sure that if I did they would be rejected with Derision. So that I have often, with some Regret, admired the Incongruity of the Circumstances of Human Life ; how little Reason Man has to be proud, notwithstanding his Wisdom and Council, when even in the greatest Concerns of his Life, Custom, Mode, Fancy, and many other Circumstances, may so envelop him with Prejudice, that it may so happen, that in some Cases of Distress, one
Man

Man may be morally certain of what will help another, and yet it may be the most absurd Thing in the World to disclose it to him, and impossible to convince him if he should. I have the more amply related this unusual Circumstance, because it seems to me to illustrate, above any thing whatsoever, the Influence of Riding on the Nerves or Solid Parts of the Body ; and as strange and unheard-of a Symptom as it may seem to some, I can aver it is a most solemn Truth, and what I had frequent and reiterated Occasions to observe.

After I had by these Means recovered a good Measure of Health, I enjoyed it about a Year and a half, by the help of Riding at due Intervals ; and I was pretty strong, and able to make considerable Journeys, which my Affairs then required. But in those Journeys, I was so unfortunate, as to abuse that most excellent Expedient that I had received so much good from ; for, thinking myself stronger than I really was, and
riding

riding long Journeys beyond my Strength, I was took on a sudden, and in the midst of a Journey, with the strangest sort of *Deliquium* that perhaps ever was heard off, in which I was forced to drink such Quantities of Spirituous Liquors, as at another Time would have made me more than ordinarily drunk, which then could scarce keep Life in me: To these sort of Fits, after some Time, was added a *Diarrhæa* of a peculiar and singular Kind, which was attended with a Nauseousness and Inclination to vomit, more than usual in that Case; and when the *Diarrhæa* at any Time happened to be a little more violent than ordinarily, a spontaneous Vomiting ensued, as violent as if I had taken a strong Emetic; and what is remarkable, those Nights after my Vomiting, I sweat to that degree, as to make my Shirt and Sheet as wet, as if they had been dipped in Water; upon which, instead of being weakened, I was refreshed, and freed from
the

the greater Severity of these Symptoms for some Days; which plainly shewed how pernicious that Pforadic Salt was, which the Mercurial Particles has repelled, and intimately mixed in my Blood. Thus I had three Calamities upon me at once; a Flux, a Vomiting, and the *Deliquiums* I spoke of before; the last of which had something so incredible in them, that though most severely true, and known to several in this City, yet I shall forbear to relate it in this Place, lest I should be thought to exceed the Truth, by telling that which scarce ever had a Parallel; I shall only say, that the Gripes and Vomiting were comparatively a Pleasure to this. I do not speak in Heat, but seriously and calmly, that the Vomiting, though so frequent and severe, was desirable, if compared with these most strange Faintings; which were so tormenting and insupportable, that if I had been stabbed, or had had my Flesh cut with Knives, I am certain,

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I could much easier have borne it. Under this Complication of Misery, I was denyed likewise the Ease, which is to be obtained by *Laudanum*, which I was prohibited by the Nature of my Circumstances, and by very good Advice directed to abstain from it. And as for Emetics, there was no using of them for other Reasons; so that the Business was left wholly to Styptics, which not putting the least Stop to my Distemper, I resolved to betake myself to Riding again, having rested so long, and would try if using it moderately and frequently might not keep up my Spirits, as formerly it had done, and it proved according to my Hopes; for by diligent and fervent Application to these Means, I made a shift to support myself, and keep Things in an *Æquilibrium*, under these pressing Circumstances; insomuch that I held out, even under such Severities as I have related, no less a Time than a Year and Nine Months, when at length

length these Evils gained upon me, and my Vomitings were so frequent, and incredibly violent, that they took away the Use of my Limbs, when I was forced to be lifted every Time upon my Horse, that I might continue my Riding, though it were but to gain a little Periodical Ease ; till that Seizure on my Limbs increasing, I was confined to my Chamber, my Legs and Thighs swell'd, and in the Opinion of three Physicians, whose Assistance I then had, I was very near the End of this (as it was literally to me a) tedious *Journey of Life*: When it pleased God, that in this Extremity, one of those Physicians was so happy, as to direct me to a mild chymical Medicine, too seldom used for that Intent, which stopped my Vomiting, and created a sudden and surprizing Change in me ; the Swelling of my Legs went off in less than three Weeks, and in about six Weeks Time, from that Emaciated Condition, I was as Fleshy, as

a perfect State of Health. By this it is plain, that the great Stress of Vomiting threw off the Humour, and that the Swellings of my Legs was in part, if not altogether, Critical; and that the Habituating myself so very much to Riding, did enable Nature to throw off the Humour that Way, and support her under the Shock of those numerous Vomitings. After this, by the Use of Chalybeates, taken for a great while together, and with Riding upon it, I recovered as good an Appetite and Digestion, as I had before these Vomitings came upon me, and my Flux entirely stopped, and for two Years after, I thank God, I lived an easy and happy Life.

Thus I have given a succinct and true Account of a long and severe Distemper, which it has pleased Almighty God to lay upon me: By which it is plain, that as some Men are distinguished by Riches, Honours, and the like; others may be as remarkable

markable in the Degrees of their Affliction and Anguish, and may be forced to pass not only Days, but Years, of that which we call Life, after such a Manner, that if it were not for higher Considerations, it would be far better not to be. That in the very best of a Man's Years, in the Time of Hopes, Prospects, and Advantages, a Man may be so wretched as to be debarred the Capacity of making use of them, and in a sense buried alive.

But since I have offered the World a Relation of my Distemper, I shall make bold to take Notice of two or three Things observable in it, which may perhaps be of use to some, though the very same Distemper I hope will never be the Lot of any one. And this the rather, because those Remarks are agreeable to my Subject.

First then, I think it is very clear, from the Circumstances of my Case,

that where Indications arise which run counter to one another, which every one knows is the worst of Difficulties a Physician meets with; in such an Emergency, nothing can be so likely to ballance between them, as the having recourse to some proper Exercise, if possible; for it is hard but it will suit with one of those Circumstances, and not improbable, that it will give Help in both.

Secondly, From the Cessation of my Gripes as soon as ever I got on Horseback, I am convinced that Pain may be very much obviated or mitigated by the Motion of the Body, that is, by those Means a Man may make a shift to sit loose from it. It was a Piece of Extravagant Nonsense in the Stoics, to pretend to reason with Pain, and account it no Evil; a Man might as well pretend to fence against Hunger with Resolution, and be accounted blameable for starving through Want of Victuals. Undoubtedly

edly Pain is the greatest of Evils to the Body, and that which we cannot but endeavour to free ourselves from ; but till that can be done, it will be a Happiness, if we can so manage Things, as to perceive less of it, or, as I said before, sit loose from it ; and that I think may certainly be obtained from the Motion of the Individual of such or such a kind as the Pain will best admit of. Not only Thought, but the Perception of a Pain, may be in some Measure interrupted by a swift Motion, for that Perception cannot strike so strong at such a Time : A Man that should set himself to muse on a full Gallop, would think but very incoherently ; and if Thought itself may be thus broke off, certainly the Sensation of Pain, which can be no quicker than Thought, may be likewise happily interrupted, and rendered more dull. These Considerations would be of real Service to Persons afflicted with scorbutic Pains, if they could induce them to a reso-

lute Practice of Riding; for all those Pains in the Shoulders, Back, or Hips would gradually abate in the Time of that Exercise, as well as by the Habit of it, the Cause would be removed. But moreover there are other sorts of Gestation or Voiture, that are suitable with the keenest Pains, as the Motion of a Boat, a Litter, a Chair, a Swing, and the like: In these there are no *Motus Contrarietas*, as Dr. Sydenham calls it, no Jolting, which in some Cases, as in the Gout, is not tolerable; but they may be applied to the severest Cases, and I doubt not would sooth the Spirits, and give great Relief. And here I cannot but think that a good Mechanic might invent some Machine, after the Manner of the *Petaurus*, or the great Swing of the Antients, which might be of the greatest Service to People in the Extremities of the Gout, by diverting the Sensation, and turning the Edge of the Pain. A Man that has been laid up for several

Weeks,

Weeks, would certainly find by such a Motion as great an Alteration, as one who has been confined to his Bed for some Time does upon his first getting up, which is very great; and certainly if the *Romans*, out of Luxury and Wantonness, could be swung to Sleep in Hanging-Beds of Silver, it may be allowed, that a Person in Torment may use the same Means to obtain Ease. I do not know why a Motion upon a Round should not do some Service in this Case, for there would be a Sort of Sickness in the Stomach, caused by the Rotation, which would withdraw the Spirits from the Place of the Pain; and moreover undoubtedly dispose to Sleep. These Things cannot be thought extravagant, if they can suffice to give any the least Ease to Men under such Pains, as those of the Gout, when the *Carnificina* lasts so long, as to exceed in some Measure all human Patience; when *Non rectius podagræ quam iracundiæ paroxysmus omnis dici*

poteſt, * as Dr. Sydenham, who knew too well what it was, ſays of it; I ſay, in ſuch Extremities, nothing ought to be thought ridiculous that can afford the leaſt Eaſe. I could ſay much more on this Subject; I could name a very worthy Gentleman, who not long ago had ſuch an odd Sort of a Cholic, that he found nothing would relieve him in the Fits of it, ſo much as lying with his Head downward; which Poſture proved always ſo advantageous to him, that he cauſed a Kind of Frame to be made, to which he cauſed himſelf to be faſtened with Bolts, and then his Servants were to turn him with his Head downwards; after which Manner he hung till his Pain went off: And I hope none will ſay it was unbecoming a grave and wiſe Man, to make uſe of ſuch odd Means to get rid of an unſupportable Pain. But I have perhaps already ſaid more than

* When it looks as much like a Fit of Anger, as a Fit of the Gout.

will be relished by some of those Gentlemen, who are so happy as to be really ignorant, or to have but very slight and imperfect Notions of the Nature of Pain; and before they censure me, they would do well to peruse Mr. *Collier's* excellent Essay upon Pain; where they will find such an Account of it, and such Instances of the Behaviour of healthy and strong Men under it, that they will the more easily admit, that for the Sick and Infirm, it may be in some Measure feasible to avoid, as it were, the Sensations of Pain, and, as much as can be, sit loose from it.

The next and last Thing which I shall take notice of, in my Distemper, is the Frequency of those Vomitings; and that notwithstanding they lasted so long on me, I received no Harm from them. It is a great Misfortune in the Business of a Physician, that he finds so many People averse to that Sort of Physic, whereby
he

he is compelled to prosecute a Cure by more uncertain and inefficacious Means; whereas if those Persons did but consider, they might easily find Arguments to convince them, that there is no such Danger as they apprehend, in the Use of moderate Emetics, where there is no *Mala Conformatio*, nothing in the Make of the Breast that forbids it. They may consider that the Vomiting which comes upon going to Sea, though it lasts sometimes two or three Days together, and all the Time seems as violent as that we procure by our Emetics, yet it never hurts any one; and does not so much weaken those who have undergone it. I know two Gentlemen who were sick all the Time of their being upon the Sea, one of them all the Time of his Passage to and from the *West-Indies*, and yet they received no Hurt by it. And I do not know but I myself have vomited as much as any ten Men living, and yet am not in the least hurt by it. And we
are

are furnished with Medicines, so gentle and commendable, that they may be repeated at reasonable Intervals, without the least Danger of any ill Consequence.

From these Considerations of the great *Evacua* with which we bear Vomiting, though it seems so troublesome while it lasts; I am convinced that it may be accounted for after the same Manner as Gymnastic Effects are; besides that of the arising of the Pulse upon the Stimulating and Irritation of the Fibres of the Stomach, and the excessive Pressure and Shock of the Glands of several Parts, with the other *Phænomena* of Vomiting, shew that it does partake of the Nature of an Exercise; and it is a great Happiness of the Individual, that the Author of Nature has allotted such secondary Uses of the Stomach, Diaphragm, and other Parts employed in Vomiting, that they should not only serve to throw up what is disagreeable, but

but strengthen the whole Oeconomy in that very Act. And here if it be allowed, that the Irritation of the Ventricle does raise and strengthen so much, I cannot but think I may venture to propose, as worthy the Consideration of the best Judges of these Matters, whether when we use Emetics, we ought to rest our Expectations upon a few momentary Efforts, when we see Nature will bear the carrying on of the same Measures so much longer; that is, whether it would not be more expedient in some Cases, to give our safe and gentle Emetics in lesser Quantities than we do, *viz.* so as to make the Person sick, but not to a Degree sufficient to make him throw up the Contents of his Stomach; and when that Quantity of the Medicine has passed off after that manner like an Alterative, to repeat the same Dose, and so continue on that Sickness for several Hours, without raising it to that Degree, as to force the Person to vomit
above

above once or twice in all the Time. This, I say, I think is worth Consideration, and may be of singular Advantage in some Cases of a Consumption, and in Hysteric Cases, when we do not give Vomits to cleanse the Stomach only; for by this Means we can elevate Nature very much, and procure a just *Diaphoresis*, when perhaps by the best of Cordials we may only create a Colliquation; and after this manner the Springs will be wound up more gradually; when if the Emetic passes off with strong Efforts, and very quick, after the usual manner, we give Nature only a Wrench, the Effects of which are soon over. I would not be here understood, as if I would put this in Practice; I do not pretend to Authority sufficient for such Innovations, I only presume to offer these Things, by Way of Problem; and one of my Stature may sometimes happen to start a Hint, which those who are taller in Wisdom and Understanding

ing may cultivate and improve to Perfection.

These are some of the Thoughts which the Severities of a most tedious Distemper have suggested to me, which if they can be of any Use, to help to guide others to that which may deliver them from their Calamities, it would be a great Satisfaction and Recompence to me for my Pain, to perceive that it has conduced to another's Ease. But if these Speculations shall not be worthy to have such an Effect, I hope I shall be pardoned upon the Account of my good Intentions; especially seeing I am not singular, but have so very many Companions of those who have troubled the World with Things of little or no Moment.

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